

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
COLORADO RIVER BASIN REGION**

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**ORDER R7-2019-0003  
NPDES CA7000001**

**WASTE DISCHARGE REQUIREMENTS  
FOR THE CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION,  
CENTINELA STATE PRISON WASTEWATER TREATMENT PLANT**

The following Discharger is subject to waste discharge requirements (WDRs) set forth in this Order:

**Table 1. Discharger Information**

<b>Discharger</b>	California Department of Corrections and Rehabilitation (CDCR)
<b>Name of Facility</b>	Centinela State Prison Wastewater Treatment Plant
<b>Facility Address</b>	2302 Brown Road
	Imperial, CA 92251
	Imperial County

**Table 2. Discharge Location**

<b>Discharge Point</b>	<b>Effluent Description</b>	<b>Discharge Point Latitude (North)</b>	<b>Discharge Point Longitude (West)</b>	<b>Receiving Water</b>
001	Secondary treated domestic disinfected wastewater	32°, 49', 12"	115°, 46', 12"	Dixie Drain 1-C (Tributary to the New River)

**Table 3. Administrative Information**

This Order was adopted on:	April 11, 2019
This Order shall become effective on:	May 1, 2019
This Order shall expire on:	April 30, 2024
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	September 3, <b>2023</b> , or as soon as possible if planned changes meet the Notice Requirement under 40 C.F.R. 122.41(l) (1).
The U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, Colorado River Basin Region classified this discharge as follows:	Minor

I, Paula Rasmussen, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Colorado River Basin Region, on **the date indicated above**.

\_\_\_\_\_  
Paula Rasmussen  
Executive Officer

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## I. FACILITY INFORMATION

Information describing the Centinela State Prison Wastewater Treatment Plant (Facility) is summarized in Table 1 and in Sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

## II. FINDINGS

- A. Legal Authorities.** This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.
- B. Provisions and Requirements Implementing State Law.** The requirements in Section VI.C.4 of this Order are included to implement state law only. These requirements are not required or authorized under the federal Clean Water Act (33 U.S.C. § 1251 et seq.); consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- C. Background and Rationale for Requirements.** The Colorado River Basin Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for the requirements in this Order, is hereby incorporated into and constitutes Findings for this Order. Attachments A through E and G are also incorporated into this Order.
- D. Notification of Interested Parties.** The Colorado River Basin Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- E. Consideration of Public Comment.** The Colorado River Basin Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order R7-2014-0003 upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Colorado River Basin Water Board from taking enforcement action for violations of the previous Order.

## III. DISCHARGE PROHIBITIONS

- A.** The discharge of waste to land is prohibited unless authorized in a separate waste discharge permit.
- B.** The discharge of treated wastewater from the Facility at a location or in a manner different from that described in this Order is prohibited.
- C.** The discharge of trash from the Facility to the Dixie Drain 1-C is prohibited.
- D.** The bypass or overflow of untreated or partially-treated wastewater or wastes to the Dixie Drain 1-C is prohibited, except as allowed under Sections I.G (Bypass) and I.H (Upset) of Attachment D, Standard Provisions.

- E. The discharge of waste in excess of the design treatment or disposal capacity of the system, 0.96 million gallons per day (MGD), is prohibited.
- F. The discharge of waste that causes pollution or nuisance as defined in Water Code section 13050, subdivisions (l) and (m), respectively, is prohibited.

#### IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

##### A. Effluent Limitations

##### 1. Final Effluent Limitations – Discharge Point 001

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program (MRP), Attachment E:

**Table 4. Effluent Limitations**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	0.96	---	---	---	---
pH	Standard Units	---	---	---	6.0	9.0
Biochemical Oxygen Demand (5-day @ 20°C; BOD <sub>5</sub> )	mg/L <sup>2</sup>	45	65	---	---	---
	lbs/day <sup>1,3</sup>	360	520	---	---	---
Suspended Solids, Total (TSS)	mg/L	59	89	---	---	---
	lbs/day <sup>1</sup>	472	713	---	---	---
Oil and Grease, Total <sup>5</sup>	mg/L	---	---	25	---	---
	lbs/day <sup>1</sup>	---	---	200	---	---
Chlorine, Residual Total	mg/L	0.01	---	---	---	0.02
	lbs/day <sup>1</sup>	0.08	---	---	---	---
Copper, Recoverable Total	µg/L <sup>4</sup>	17	---	35	---	---
	lbs/day <sup>1</sup>	0.139	---	0.280	---	---
alpha-BHC	µg/L	0.013	---	0.026	---	---
	lbs/day <sup>1</sup>	0.0001	---	0.00021	---	---

<sup>1</sup> The mass-based effluent limitations are based on a design capacity of 0.96 MGD.

<sup>2</sup> mg/L: Milligrams Per Liter

<sup>3</sup> lbs/day: Pounds Per Day

<sup>4</sup> µg/L: Micrograms Per Liter

<sup>5</sup> Total oil and grease shall include the polar and non-polar fraction of oil and grease materials.

- b. Percent Removal: The average monthly percent removal of BOD<sub>5</sub> and TSS shall not be less than 65 percent.
- c. Toxicity: There shall be no toxicity in the treatment plant effluent. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, or toxicity tests of appropriate duration or other appropriate methods specified by the Colorado River Basin Water Board as set forth in Section V of Attachment E, MRP.

- d. **Bacteria:** The bacterial density in the wastewater effluent discharged to the receiving water shall not exceed the following values, as measured by the following bacterial indicator:
  - i. ***E. coli.*** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a Most Probable Number (MPN) of 126 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.
  - ii. **Enterococci.** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 33 per 100 milliliters, nor shall any sample exceed a MPN of 100 per 100 milliliters.
  - iii. **Fecal Coliform.** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 200 per 100 milliliters, nor shall more than ten percent of the total samples during any 30-day period exceed a MPN of 400 per 100 milliliters.

**2. Interim Effluent Limitations – Not Applicable**

**B. Land Discharge Specifications – Not Applicable**

**C. Recycling Specifications – Not Applicable**

**V. RECEIVING WATER LIMITATIONS**

**A. Surface Water Limitations**

Receiving water limitations are based on water quality objectives contained in the region's water quality control plan (Basin Plan) and are a required part of this Order. The discharge from the Facility shall not cause or contribute to the following in the Dixie Drain 1-C:

- 1. **Dissolved Oxygen.** The concentration of dissolved oxygen in the receiving water to fall below 5.0 mg/L. When dissolved oxygen in the receiving water is already below 5.0 mg/L, the discharge shall not cause any further depression.
- 2. **Oil, Grease, and Floating Material.** The receiving water to contain oil, grease, floating material (liquids, solids, foam and scum) or suspended material in amounts that create a nuisance or adversely affect beneficial uses.
- 3. **Pesticides.** The deposition of pesticides or any combination of pesticides in concentrations that adversely affect beneficial uses.
- 4. **Color.** Discoloration of the receiving water that creates a nuisance or adversely affects beneficial uses.
- 5. **Biostimulatory Substances.** The receiving water to contain biostimulatory substances in concentrations that promote aquatic growths to the extent that such growths cause nuisance or adversely affect beneficial uses.
- 6. **Turbidity.** An increase in turbidity that adversely affects beneficial uses.
- 7. **pH.** The normal ambient pH of the receiving water to fall below 6.0 or exceed 9.0 units.
- 8. **Temperature.** Alter the natural receiving water temperature unless the Discharger can demonstrate to the satisfaction of the Colorado River Basin Water Board that the alteration in temperature does not adversely affect beneficial uses.
- 9. **Settleable Substances.** The deposition of material in amounts that cause a nuisance or adversely affect beneficial uses.

10. **Chemical Constituents.** Chemical constituents to be present in the receiving water in concentrations that adversely affect beneficial uses.
11. **Toxicity.** Toxic pollutants to be present in the water column, sediments or biota in concentrations that adversely affect beneficial uses or that produce detrimental physiological responses in human, plant, animal, or aquatic life.
12. **Taste and Odors.** An increase in taste- or odor-producing substances that adversely affects beneficial uses.
13. **Total Dissolved Solids.** The Discharge shall not cause the concentration of total dissolved solids (TDS) in the Dixie Drain 1-C to exceed an annual average concentration of 4,000 mg/L or a maximum daily concentration of 4,500 mg/L.
14. **Water Quality Standards.** The violation of any applicable water quality standard for receiving waters adopted by the Colorado River Basin Water Board or the State Water Resources Control Board (State Water Board) as required by the federal Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Clean Water Act section 303 or amendments thereto, the Colorado River Basin Water Board will revise and modify this permit in accordance with such more stringent standard.

**B. Groundwater Limitations – Not Applicable**

**VI. PROVISIONS**

**A. Standard Provisions**

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.
2. **Colorado River Basin Water Board Standard Provisions.** The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between the federal standard provisions included in Attachment D and the Colorado River Basin Water Board's standard provisions, the more stringent provision shall apply:
  - a. The Facility shall be protected from any washout or erosion of wastes or covering material, and from any inundation, which could occur as a result of floods having a predicted frequency of once in 100 years.
  - b. The Discharger shall ensure that all site-operating personnel are familiar with the contents of this Order, and shall maintain a copy of this Order at the site.
  - c. The Discharger's wastewater treatment plant shall be supervised and operated by persons possessing certification of the appropriate grade pursuant to California Code of Regulations, title 23, section 3680.
  - d. The Discharger shall immediately notify the Office of Emergency Services by phone at (800) 852-7550 to report any noncompliance that may endanger human health or the environment as soon as: (1) the Discharger has knowledge of the discharge, (2) notification is possible, and (3) notification can be provided without substantially impeding cleanup or other emergency measures.

To carry out this objective, the following notification requirements are to be implemented:

- i. For any discharges of sewage that result in a discharge to a drainage channel or surface water, the Discharger shall, as soon as possible, but not later than two (2) hours after becoming aware of the discharge, notify the Office of Emergency Services.

- ii. As soon as possible, follow the notification, reporting, monitoring, and recordkeeping requirements under WQ 2013-0058-EXEC for the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems. ([http://www.waterboards.ca.gov/board/decisions/adopted\\_orders/water\\_quality/2013/wqo2013\\_0058exec.pdf](http://www.waterboards.ca.gov/board/decisions/adopted_orders/water_quality/2013/wqo2013_0058exec.pdf)).
- e. The Discharger shall provide a report to the Colorado River Basin Water Board upon determining that the treatment plant's monthly average flow rate for any month exceeds 80 percent of the design treatment or disposal capacity. The report should indicate what steps, if any, the Discharger intends to take to provide for the expected wastewater treatment capacity necessary when the plant reaches design capacity.
- f. In the event of any changes in ownership or management of this operation, the Discharger shall notify the Colorado River Basin Water Board of such change in writing. This Discharger shall also notify the succeeding owner or operator by letter that the new owner or operator must apply for coverage under this Order prior to discharging. The Discharger shall forward a copy of this letter to the Colorado River Basin Water Board within 30 days.
- g. Prior to any modifications in this Facility, which would result in any material change in the quality or quantity of wastewater treated or discharged, or any material change in the location of discharge, the Discharger shall report all pertinent information in writing to the Colorado River Basin Water Board, and if required by the Colorado River Basin Water Board, obtain revised requirements before any modifications are implemented.
- h. This Order does not authorize violation of any federal, state, or local laws or regulations.
- i. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.
- j. In the event the Discharger does not comply or will be unable to comply with this Order for any reason, the Discharger shall notify the Colorado River Basin Water Board as follows:
  - i. For noncompliance with any prohibition, effluent limitation or receiving water limitation of this Order, or for a spill in excess of 1,000 gallons:
    - (a) The Discharger shall notify the Colorado River Basin Water Board by email to [RB7-coloradoriver@waterboards.ca.gov](mailto:RB7-coloradoriver@waterboards.ca.gov) within 24 hours of having knowledge of such noncompliance.
    - (b) The Discharger shall submit a written report within five days of noncompliance, unless this requirement is waived by Colorado River Basin Water Board staff. The written report shall state the nature, time, duration, and cause of the noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation.
  - ii. For all other forms of noncompliance:
    - (a) The Discharger shall notify the Colorado River Basin Water Board at the time monitoring reports are submitted. The Discharger shall include a written report regarding noncompliance as described in Section VI.A.2.j.i.b.



- k. In accordance with Water Code section 1211, the Discharger shall obtain approval from the State Water Board's Division of Water Rights prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse.

## **B. Monitoring and Reporting Program (MRP) Requirements**

The Discharger shall comply with the MRP in Attachment E of this Order and any future revisions thereto. This MRP may be modified by the Executive Officer at any time during the term of this Order, and may include an increase in the number of parameters to be monitored, the frequency of the monitoring, the number and size of samples to be collected or minor clarifications on MRP requirements.

## **C. Special Provisions**

### **1. Reopener Provisions**

- a. **Standard Revisions.** This Order may be modified, revoked and reissued, or terminated, for cause. The filing of a request by the Discharger for an Order modification, revocation and reissuance, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. Causes for modification include, but are not limited to, the violation of any term or condition contained in this Order, a material change in the character, location, or volume of discharge the modification of land application plans, or the adoption of new regulations by the State Water Board or the Colorado River Basin Water Board, including revisions to the Basin Plan.
- b. **Pretreatment Program.** Pursuant to 40 C.F.R. section 403.8(e), the Colorado River Basin Water Board may modify, or revoke and reissue, the NPDES permit if the Discharger must implement a pretreatment program.
- c. **Whole Effluent Toxicity.** As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a numeric chronic toxicity limitation, an acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include effluent limitations based on that objective.
- d. **303(d)-Listed Pollutants.** If new or revised water quality objectives or Total Maximum Daily Loads (TMDLs) come into effect for receiving waters, the effluent limitations in this Order may be modified as necessary to reflect any updated water quality objectives and TMDL wasteload allocations.
- e. **Reasonable Potential.** This Order may be modified, or revoked and reissued, if present or future investigations demonstrate that the Discharger is causing or contributing to excursions above any applicable water quality standard or objective, or adversely impacting water quality and/or the beneficial uses of receiving waters.

### **2. Special Studies, Technical Reports, and Additional Monitoring Requirements**

#### **a. Toxicity Reduction Evaluation (TRE) Plan**

The Discharger developed and submitted to the Colorado River Basin Water Board a TRE Work Plan on December 8, 2015 to comply with the requirements of Order No. R7-2014-0003. The Discharger shall review and update the existing TRE Work Plan and submit it to the Colorado River Basin Water Board within 90 days of the effective date of this Order. The updated TRE Work Plan must satisfy the requirements specified in Section V.B.1 of the MRP (Attachment E).

**b. Optional Metal Translator Study**

Should the Discharger wish to use a translator for metals and selenium other than the default USEPA conversion factors listed in Tables 2 and 3 of the California Toxic Rule (CTR), the Discharger shall perform studies to determine site-specific metal translators and must submit a written request to the Executive Officer. Otherwise, the USEPA conversion factors shall remain the default standard used when calculating any water quality-based effluent limitations for selenium and metals. USEPA has developed a guidance manual, EPA 823-B-96-007, June 1996, entitled, *The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion*.

**c. Total Dissolved Solids (TDS) Study**

The Colorado River Basin Water Board required the Discharger to conduct a study and evaluation of programs and actions implemented to reduce TDS discharges into the receiving water body. The Discharger submitted a TDS study, dated December 2013, in which the Discharger indicated the discharge has a greater than 400 mg/L incremental increase over the salinity of the source water. The current TDS concentration of WWTP effluent is 1,058 mg/L.

No further action on the TDS study is required; however, the Discharger shall continue to monitor TDS concentrations in the WWTP effluent pursuant to the MRP, Attachment E.

**3. Best Management Practices and Pollution Prevention**

**a. Pollutant Minimization Program**

The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) when there is evidence that a priority pollutant is present in the effluent above an effluent limitation (e.g., sample results reported as “Detected, but Not Quantified” (DNQ) when the effluent limitation is less than the Method Detection Limit (MDL), sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, or results of benthic or aquatic organism tissue sampling) and either of the following is true:

- i. A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or
- ii. A sample result is reported as Not Detected (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP Section X.B.5.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Colorado River Basin Water Board:

- i. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures when source monitoring is unlikely to produce useful analytical data;
- ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
- iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;

- iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and
- v. An annual status report that shall be sent to the Colorado River Basin Water Board including:
  - (a) All PMP monitoring results for the previous year;
  - (b) A list of potential sources of the reportable priority pollutant(s);
  - (c) A summary of all actions undertaken pursuant to the control strategy; and
  - (d) A description of actions to be taken in the following year.

b. **Spill Response Plan**

The Discharger developed and submitted to the Colorado River Basin Water Board a Spill Response Plan (SRP) to comply with the requirements of Order R7-2014-0003. The Discharger provided the 2018 update to the SRP on October 11, 2018.

The Discharger shall review and update the existing SRP on an annual basis. At a minimum, the SRP shall include sections of spill cleanup and containment measures, public notifications, monitoring, and the procedures to be carried out if floatable material is visible on the water surface near the discharge point. The Discharger shall submit the updated SRP with each Annual Report. The Discharger shall make the SRP available for staff review during Colorado River Basin Water Board inspections. The Discharger shall ensure that all operating personnel are familiar with the contents of the SRP. A copy of the SRP shall be maintained at the site and shall be accessible to all operating personnel.

c. **Storm Water**

Enrollment under the State Water Board's *General Permit for Storm Water Discharges Associated with Industrial Activities*, Order 2014-0057-DWQ (NPDES No. CAS000001) (Industrial General Permit) is required for facilities used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that is located within the confines of a facility, with a design flow of 1 million gallons per day (MGD) or more, or are required to have an approved pretreatment program under 40 C.F.R. part 403.

The Discharger is not required to submit a Notice of Intent to obtain coverage under the Industrial General Permit, because the Facility design flow is less than 1 MGD and no pretreatment program is required.

**4. Construction, Operation, and Maintenance Specifications**

a. **Treatment Basins**

- i. A minimum depth of freeboard of two (2) feet shall be maintained at all times in all treatment basins.
- ii. The treatment basins shall be managed to prevent breeding of mosquitoes, in particular:
  - (a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
  - (b) Weeds shall be minimized through control of water depth, harvesting, or herbicides.
  - (c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

- iii. The treatment basins shall be maintained so they will be kept in aerobic conditions.
- iv. On-site wastes shall be strictly confined to the lands specifically designated for the disposal operation.
- v. Public contact with undisinfected wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.
- vi. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal area.

**b. Facility and Treatment Operation**

- i. The Discharger shall, at all times, properly operate and maintain all systems and components of collection, treatment, and control which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance include effective performance measures, adequate process controls, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of this Order. All systems, both in-service and reserved, shall be inspected and maintained on a regular basis. Records shall be kept of the inspection results and maintenance performed and made available to the Colorado River Basin Water Board upon demand.
- ii. Temporary power or adequate storage capacity shall be provided to maintain the plant in operation in the event of commercial power failure.
- iii. Adequate measures shall be taken to ensure that unauthorized persons are effectively excluded from contact with the wastewater disposal facilities.
- iv. The Discharger shall implement acceptable operation and maintenance at the Facility so that needed repairs and maintenance are performed in a timely manner.

**c. Antidegradation Analysis and Engineering Report for Significant Expansion**

If discharges from the Facility will undergo significant expansion<sup>1</sup> within the next 5 years, the Discharger shall submit an antidegradation analysis report to the Colorado River Basin Water Board's Executive Officer for review and approval. The antidegradation analysis report must be developed in accordance with the state antidegradation policy (State Water Board Resolution No. 68-16) and the federal antidegradation policy (40 C.F.R. section 131.12). The report shall consider any potential impacts the discharge may have on the receiving water quality and the receiving water body's designated beneficial uses, as defined in the Basin Plan. In addition, the report shall include information on the quality of the proposed discharge and evaluate the potential impacts of the discharge; provide CEQA documentation for the proposed project; a summary that identifies whether the proposed discharge will result in degradation of water quality; and a certification that satisfies both the federal and state antidegradation policies.

**5. Special Provisions for Publicly-Owned Treatment Works (POTWs)**

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<sup>1</sup> Significant expansion means an increase in permitted design flow of greater than 10% or changes to the Facility and/or changes in the nature and character of the discharge that may result in an incremental increase in pollutants discharged to the receiving water body of greater than 10% of the permitted discharge rates. When a new or existing facility undergoes significant expansion, the discharge shall be evaluated on a pollutant by pollutant basis.

a. **Source Control and Pretreatment Provisions**

- i. In the event that the Facility receives influent from Industrial Users (40 C.F.R. § 403.3(j)) which Pass Through (40 C.F.R. § 403.3(p)) or Interfere (40 C.F.R. § 403.3(k)) with the operation of the wastewater treatment facility or are otherwise subject to National Pretreatment Standards (40 C.F.R. § 403.3(l)), then the Facility shall have and enforce an adequate pretreatment program (40 C.F.R. § 403.8) as follows:
  - (a) The Discharger shall be responsible for the compliance with all pretreatment requirements contained in 40 C.F.R. part 403, and shall be subject to enforcement actions, penalties, and other remedies by the USEPA, or the Colorado River Basin Water Board, as provided in the Clean Water Act.
  - (b) Within one year of notification that a pretreatment program is required, the Discharger shall submit a formal pretreatment program for approval by the Colorado River Basin Water Board.
  - (c) The Discharger must seek approval of its pretreatment program from the Colorado River Basin Water Board subject to Provision VI.C.1.b of this Order in the event a pretreatment program is developed.

b. **Collection Systems**

- i. **Statewide General WDRs for Sanitary Sewer Systems.** The Discharger is subject to the requirements of, and must comply with, State Water Board Order 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* as amended by State Water Board Order WQ 2013-0058-EXEC and any subsequent order (Sanitary Sewer Order). The Sanitary Sewer Order requires public agencies that own or operate sanitary sewer systems to develop and implement sewer system management plans (SSMPs) and report all sanitary sewer overflows (SSOs) to the State Water Board's online SSO database. The Discharger is enrolled under the Sanitary Sewer Order and the Discharger's WDID number is 7SSO11187.
- ii. **Collection System.** The Discharger's collection system is part of the system that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system. (40 C.F.R. section 122.41(e).) The Discharger must report any noncompliance (40 C.F.R. section 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 C.F.R. section 122.41(d)). See the Order at Attachment D, Subsections I.D, V.E, V.H, and I.C., and the following section of this Order.

c. **Sewage Sludge and Biosolids**

- i. This Order does not authorize any act that results in violation of requirements administered by USEPA to implement 40 C.F.R. part 503, Standards for the Use or Disposal of Sewage Sludge. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Discharger is responsible for meeting all applicable requirements of 40 C.F.R. part 503 that are under USEPA's enforcement authority. Attachment H contains biosolids and sludge management requirements.
- ii. Where applicable, the Discharger shall ensure compliance with the requirements in State Water Board Order No. 2004-12-DWQ, *General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a*

**6. Other Special Provisions**

- a. The Discharger may be required to submit technical reports as directed by the Colorado River Basin Water Board's Executive Officer.
- b. The Discharger shall exclude from the wastewater treatment plant any liquid or solid waste that could adversely affect the plant operation or effluent quality. The excluded liquid or solid waste shall be disposed of in accordance with applicable regulations.

**7. Special Provisions Reporting Schedules**

- a. **Deliverables and Due Dates.** The Discharger shall comply with the following schedule of Remedial Measures as summarized in Table 5:

**Table 5. Schedule of Remedial Measures**

Activity	Description	Due Date
Spill Response Plan VI.C.3.b	The Discharger shall update the Spill Response Plan (SRP). The SRP shall be updated annually and available for inspection.	Annual updates must be submitted yearly to the Colorado River Basin Water Board with Annual Report.
Toxicity Reduction Evaluation (TRE) Work Plan VI.C.2.a	The Discharger shall review and update the existing TRE Work Plan, and submit it to the Colorado River Basin Water Board. The Work Plan should include a description of steps the Discharger will take in the event toxicity is detected.	Within 90 days of the effective date of this Order.
Antidegradation Analysis and Engineering Report for Significant Expansion VI.C.4.c	For discharges from the Facility that will undergo significant expansion within the next 5 years, the Discharger shall submit an antidegradation analysis report to the Colorado River Basin Water Board's Executive Officer for review and approval.	Prior to start of construction of significant changes to the treatment plant, and to be submitted to Colorado River Basin Water Board's Executive Officer.
Pollutant Minimization Program (PMP) for Priority Pollutants, VI.C.3.a	The Discharger shall develop a PMP when there is evidence a priority pollutant is present in the effluent above an effluent limitation and either: (1) the sample result is reported as DNQ and the effluent limitation is less than the RL; or (2) a sample result is reported as ND and the effluent limitation is less than the MDL.	Within 90 days after receipt of evidence of a priority pollutant effluent exceedance, and to be submitted to Colorado River Basin Water Board.

**VII. COMPLIANCE DETERMINATION**

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

**A. Priority Pollutant Effluent Limitations**

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Section VII of this Order. For purposes of reporting and administrative enforcement by the Colorado River Basin Water Board or the State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the Reporting Level (RL).

## **B. Multiple Sample Data**

When determining compliance with an Average Monthly Effluent Limitation (AMEL), Average Weekly Effluent Limitation (AWEL) and Maximum Daily Effluent Limitation (MDEL) for pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of “Detected, but Not Quantified” (DNQ) or “Not Detected” (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

1. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
2. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

## **C. Average Monthly Effluent Limitation (AMEL)**

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month), where no data is available to show compliance. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger will be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month with respect to AMEL.

## **D. Average Weekly Effluent Limitation (AWEL)**

If the average (or when applicable, the median determined by subsection B above for multiple sample data) of daily discharges over a calendar week exceeds the AWEL for a given parameter, this will represent a single violation, though the Discharger will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance where no data is available to show compliance. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Discharger will be considered out of compliance for that calendar week. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week with respect to AWEL.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

## **E. Maximum Daily Effluent Limitation (MDEL)**

If a daily discharge (or when applicable, the median determined by subsection B above for multiple sample data of a daily discharge) exceeds the MDEL for a given parameter, the Discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day with respect to MDEL.

For multiple samples collected in a calendar day, the maximum daily value is the average of the samples collected in a calendar day, or when applicable, the median as determined by Subsection B, above.

**F. Instantaneous Minimum Effluent Limitation**

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation). There are no mass limits for instantaneous minimum effluent limitations.

**G. Instantaneous Maximum Effluent Limitation**

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, the Discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation). There are no mass limits for instantaneous maximum effluent limitations.

**H. Effect of Conducting a Pollutant Minimization Program (PMP)**

If a sample result for a priority pollutant, or the arithmetic mean or median of multiple sample results is below the RL, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the Discharger conducts a PMP for the priority pollutant (as described in Provisions, Section VI.C.3.a.), the Discharger shall not be deemed out of compliance.

**I. Compliance with Single Constituent Effluent Limitation**

Dischargers shall be deemed out of compliance with an effluent limitation if the concentration of a pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reported Minimum Level (ML).

**J. Mass and Concentration Limitation**

Compliance with mass and concentration effluent limitations for the same parameter shall be determined separately with their respective limitations. When the concentration of a constituent in an effluent sample is determined to be ND or DNQ, the corresponding mass emission rate (MER) determined from that sample concentration shall also be reported as ND or DNQ.

**K. Percent Removal Limitation**

Compliance with the secondary treatment standard for monthly average percent removal of biochemical oxygen demand and total suspended solids, pursuant to 40 C.F.R. part 133, shall be determined separately for each wastewater treatment facility discharging through an outfall. The monthly average percent removal is the average of the calculated daily discharge percent removals only for days on which the constituent concentrations is monitored in both the influent and effluent of the wastewater treatment facility at locations specified in the MRP (Attachment E) within a calendar month.

The percent removal for each day (Daily Percent Removal) shall be calculated according to the following equation:

$$\text{Daily Percent Removal} = \frac{(\text{Daily Influent Concentration} - \text{Daily Effluent Concentration})}{\text{Daily Influent Concentration}} * 100$$



The percent removal for the month (Monthly Percent Removal) shall be calculated according to the following equation:

$$\text{Monthly Percent Removal} = \frac{(\text{Sum of the Daily Percent Removal})}{\text{Number of Daily Percent Removal Values}}$$

**L. Chronic Toxicity Narrative Effluent Limitation**

Compliance with narrative effluent limitations established in the Order are determined from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010). The Discharger must report either a "Pass" or "Fail" and the Percent Effect as required in the Monitoring and Reporting Program, Section V. If a result is reported as a "Fail," the Discharger must follow the requirements in MRP, Section V.A, Chronic Toxicity Testing, to initiate an accelerated monitoring schedule or conduct a TRE.

**M. Bacterial Effluent Limitations**

Compliance with the bacterial effluent limitations established in Section IV.A.1.d of this Order shall be determined as follows:

1. If the calculated geometric mean bacterial concentrations for *E. coli*, enterococci, or fecal coliform exceeds the 30-day geometric mean effluent limitations summarized in the Effluent Limitations and Discharge Requirements Section IV.A.1.d of this Order, this will represent violation(s) of the water quality-based effluent limitation for the bacteria indicator(s) and the Discharger will be considered out of compliance with the bacterial indicator(s) for the month in which the samples were collected.
2. If the bacterial concentrations for *E. coli*, enterococci, or fecal coliform exceed the maximum bacterial densities summarized in the Effluent Limitations and Discharge Requirements Section IV.A.1.d of this Order, this will represent a single violation of the water quality-based effluent limitation for the bacteria indicator(s) and the Discharger will be considered out of compliance with the bacteria indicator(s) for the day in which the sample was collected.

**N. Total Residual Chlorine Effluent Limitations**

Compliance determinations for total chlorine residual shall be based on Method 1 and 2 as follows:

**Method 1 (Chlorine Monitoring)**

For Continuous Monitoring - Compliance determinations for total chlorine residual shall be based on 99% compliance. To determine 99% compliance with the effluent limitation for total chlorine residual, the following conditions shall be satisfied:

1. The total time during which the total chlorine residual values are above 0.1 mg/L (instantaneous maximum value) shall not exceed 7 hours and 26 minutes in any calendar month;
2. Individual excursions shall not exceed 0.1 mg/L for 30 minutes or longer; and
3. Individual excursions shall not exceed 6.0 mg/L at any time.

For grab samples or in the event of failure of the continuous chlorine monitoring device - Grab samples for total chlorine residual shall be collected immediately and within the first and last hours of the operators' work period, and at least every 4 hours in between. The Discharger shall provide all monitoring data for total residual chlorine and report the instantaneous maximum and average monthly concentration and mass loadings or volume with each monthly SMR for this period. When data is submitted electronically via the SMR module in the California Integrated Water Quality System (CIWQS) Program, data shall be reported in the "Attachments" section. Compliance with total chlorine residual for grab samples during this period will be determined as stated in sections VII.C and G of this Order.

#### **Method 2 (Dechlorination Agent Monitoring)**

For Continuous Monitoring - Compliance determinations for total chlorine residual shall be based on maintaining a positive dechlorination agent residual.

1. A positive dechlorination agent residual shall be maintained at all times.

For grab samples or in the event of failure of the continuous dechlorinating monitoring device or monitoring value below minimum reporting level - Grab samples for dechlorination agent shall be collected immediately and within the first and last hours of the operators' work period, and at least every 4 hours in between. The Discharger shall provide all monitoring data for dechlorination agent and report the instantaneous maximum and average monthly concentration and mass loadings or volume with each monthly SMR for this period. When data is submitted electronically via the SMR module in the CIWQS Program, data shall be reported in the "Attachments" section. If the Discharger monitors dechlorination agent and a positive value is measured, those submitting SMRs electronically shall report the result as follows: "<0.01" in the CIWQS program. Compliance with dechlorination agent for grab samples during this period will be determined as stated in Sections VII.C and G of this Order.

#### **O. Single Operational Upset**

A Single Operational Upset (SOU) that leads to simultaneous violations of more than one pollutant parameter shall be treated as a single violation and limits the Discharger's liability in accordance with the following conditions:

1. A SOU is defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.
2. The Discharger may assert a SOU as a limit to liability only for those violations which the Discharger submitted a notice of the upset as required in Section V.E.2(b) of Attachment D – Standard Provisions.
3. For purposes of federal law, determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with USEPA Memorandum Issuance of Guidance Interpreting Single Operational Upset (September 27, 1989).
4. For purposes of state law, determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Dischargers to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with Water Code section 13385(f).

**P. Significant Figures**

The Discharger shall report monitoring and calculation results with regard to significant figures consistent with tabulated values in Table 4 (Effluent Limitations).

## ATTACHMENT A – DEFINITIONS

### **Acute Toxicity Test**

Acute toxicity test is a test to determine the concentration of effluent or ambient waters that causes an adverse effect (usually mortality) on a group of test organisms during a short-term exposure (e.g., 24, 48, or 96 hours). Acute toxicity is determined using statistical procedures (e.g., point estimates or a t-test).

### **Ambient Toxicity**

Ambient toxicity is measured by a toxicity test on a sample collected from a receiving waterbody.

### **Annual Average Effluent Limitation**

The highest allowable average of monthly discharges over a calendar year, calculated as the sum of all monthly discharges measured during a calendar year divided by the number of monthly discharges measured during that year.

### **Arithmetic Mean ( $\mu$ )**

Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

$$\text{Arithmetic mean} = \mu = \Sigma x / n \quad \text{where: } \Sigma x \text{ is the sum of the measured ambient water concentrations, and } n \text{ is the number of samples.}$$

### **Average Monthly Effluent Limitation (AMEL)**

The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

For the AMEL concentration limit, it is the sum of the measured sample values divided by the number of samples for the month.

For the AMEL mass loading limit, it is the sum of the product of the flow rate (MGD) x measured sample value (mg/L) x 8.34 divided by the number of samples for the month.

### **Average Weekly Effluent Limitation (AWEL)**

The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

### **Best Management Practices (BMPs)**

BMPs are methods, measures, or practices designed and selected to reduce or eliminate the discharge of pollutants to surface waters from point and non-point discharges including storm water. BMPs include structural and non-structural controls, and operation and maintenance procedures, which can be applied before, during, and/or after pollution producing activities.

### **Bioaccumulative**

Those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

### **Biosolids**

Biosolids refer to non-hazardous sewage sludge as defined in 40 C.F.R. section 503.9.

### **Carcinogenic**

Pollutants are substances that are known to cause cancer in living organisms.

### **Chronic Toxicity Tests**

Chronic toxicity tests measure the sub-lethal effects of a discharge (e.g. reduced growth or reproduction). Certain chronic toxicity tests include an additional measurement of lethality.

### **Coefficient of Variation (CV)**

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

### **Criteria Continuous Concentration (CCC)**

Criteria Continuous Concentration equals the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (e.g., 4 days) without deleterious effects.

### **Criteria Maximum Concentration (CMC)**

Criteria Maximum Concentration equals the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time (e.g., 1 hour) without deleterious effects.

### **Daily Discharge**

Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

### **Detected, but Not Quantified (DNQ)**

DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

### **Dilution Credit**

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

### **Domestic Sewage**

Domestic Sewage is waste and wastewater from humans or household operations that is discharged to or otherwise enters a treatment works.

### **Effect Concentration (EC)**

Effect concentration is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., mortality, fertilization). EC25 is a point estimate of the toxicant concentration that would cause observable 25% adverse effect as compared to the control test organisms.

### **Effluent Concentration Allowance (ECA)**

ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (*Technical Support Document for Water Quality-based Toxics Control*, March 1991, second printing, EPA/505/2-90-001).

### **Enclosed Bays**

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

### **Estimated Chemical Concentration**

The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

### **Estuaries**

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

### **Existing Discharger**

Any Discharger that is not a new Discharger. An existing Discharger includes an "increasing Discharger" (i.e., an existing facility with treatment systems in place from its current discharge that is or will be expanding, upgrading, or modifying its existing permitted discharge after the effective date of the State Implementation Policy).

### **Geometric Mean**

Geometric mean is a measure of the central tendency of a data set that minimizes the effects of extreme values. The geometric mean used for determining compliance with bacterial standards is calculated with the following equation:

Geometric Mean =  $(C_1 \times C_2 \times \dots \times C_n)^{1/n}$  where n = the number of days samples were collected during the period, and C = the concentration of bacteria (CFU\*/100 mL) found on each day of sampling.

\*Effluent limitations for bacterial density are expressed in units of a Most Probable Number per 100 milliliters (MPN/100 ml). This calculation of geometric mean is also applicable and shall be used to determine compliance with bacterial effluent limitations.

### **Group I Pollutants**

The list of pollutants is based on Appendix A to 40 C.F.R § 123.45. The State Water Board enforcement policy located at [http://www.waterboards.ca.gov/water\\_issues/programs/enforcement/docs/enf\\_policy\\_final111709.pdf](http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf) provides the list in Appendix C: Group 1 Pollutants.

## **Group 2 Pollutants**

The list of pollutants is based on Appendix A to 40 C.F.R § 123.45. The State Water Board enforcement policy located at [http://www.waterboards.ca.gov/water\\_issues/programs/enforcement/docs/enf\\_policy\\_final111709.pdf](http://www.waterboards.ca.gov/water_issues/programs/enforcement/docs/enf_policy_final111709.pdf) provides the list in Appendix D: Group 2 Pollutants.

## **Hypothesis Testing**

Hypothesis testing is a statistical approach (e.g., Dunnett's procedure) for determining whether a test concentration is statistically different from the control. Endpoints determined from hypothesis testing are no observed effect concentration (NOEC) and lowest observed effect concentration (LOEC).

## **Incompletely Mixed Discharge**

A discharge that contributes to a condition that does not meet the meaning of a completely-mixed discharge condition.

## **Infeasible**

Infeasible means not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

## **Inhibition Concentration**

Inhibition concentration is a point estimate of the toxicant concentration that would cause a given, percent reduction in a non-lethal biological measurement (e.g., reproduction or growth), calculated from a continuous model (i.e., Interpolation Method). For example, IC25 is a point estimate of the toxicant concentration that would cause a 25 percent reduction in a non-lethal biological measurement.

## **Inland Surface Waters**

All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

## **Instantaneous Maximum Effluent Limitation**

The highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

## **Instantaneous Minimum Effluent Limitation**

The lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

## **In-Stream Waste Concentration**

In-stream waste concentration (IWC) is the concentration of a toxicant or effluent in the receiving water after mixing. The IWC is the inverse of the dilution factor. It is sometimes referred to as the receiving water concentration (RWC).

## **LC50**

LC50 (lethal concentration, 50%) is the toxicant or effluent concentration that would cause death to 50 percent of the test organisms.

## **Load Allocation**

The portion of a receiving water's total maximum daily load that is allocated to one of its non-point sources of pollution or to natural background sources.

## **Lowest Observed Effect Concentration**

Lowest observed effect concentration (LOEC) is the lowest concentration of an effluent or toxicant that results in statistically significant adverse effects on the test organisms (i.e., where the values for the observed endpoints are statistically different from the control).

**Maximum Daily Effluent Limitation (MDEL)**

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

**Median**

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements ( $n$ ) is odd, then the median =  $X_{(n+1)/2}$ . If  $n$  is even, then the median =  $(X_{n/2} + X_{(n/2)+1})/2$  (i.e., the midpoint between the  $n/2$  and  $n/2+1$ ).

**Method Detection Limit (MDL)**

MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in 40 C.F.R. part 136, Attachment B, revised as of May 18, 2012.

**Minimum Level (ML)**

ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

**Minimum Significant Difference (MSD)**

Minimum significant difference is the magnitude of difference from control where the null hypothesis is rejected in a statistical test comparing a treatment with a control. MSD is based on the number of replicates, control performance, and power of the test.

**Mixing Zone**

The Colorado River Basin Water Board does not have a mixing zone policy in the Basin Plan. Therefore, in order for a mixing zone to be allowed in the Colorado River Basin Region, it would be only pursuant to a State policy. The State Implementation Policy (SIP) allows a mixing zone for priority pollutants and toxicity. Accordingly, a mixing zone applies to the Colorado River Basin Region under this State policy.

The SIP requires a mixing zone analysis be completed before any dilution credit is granted. Following completion of the mixing zone study, the Colorado River Basin Water Board must reconsider the receiving water limitations to ensure that they are as stringent as necessary to fully protect the receiving water.

**Municipality**

Municipality means a city, town, borough, county, parish, district, association, or other public body created by or under State law and having jurisdiction over disposal of sewage, industrial wastes, or other wastes, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of Clean Water Act.

**New Discharger**

New Discharger includes any building, structure, facility, or installation from which there is, or may be, a discharge of pollutants, the construction of which commenced after the effective date of the State Implementation Policy.

**No Observed Effect Concentration (NOEC)**



No observed effect concentration is the highest tested concentration of an effluent or toxicant that causes no observable adverse effect on the test organisms (i.e., the highest concentration of toxicant at which the values for the observed responses are not statistically different from the control).

#### **Not Detected (ND)**

Sample results which are less than the laboratory's MDL.

#### **Objectionable Bottom Deposits**

Objectionable Bottom Deposits are an accumulation of materials or substances on or near the bottom of a water body, which creates conditions that adversely impact aquatic life, human health, beneficial uses, or aesthetics. These conditions include, but are not limited to, the accumulation of pollutants in the sediments and other conditions that result in harm to benthic organisms, production of food chain organisms, or fish egg development. The presence of such deposits shall be determined by the Colorado River Basin Water Board(s) on a case-by-case basis.

#### **Ocean Waters**

Not Applicable.

#### **Percent Effect**

The percent effect represents the difference between the response of the species at the IWC (i.e., 100% effluent) and the response in the control sample, relative to the control sample, as a percentage. The percent effect at IWC can be calculated as follows:

$$\text{Percent Effect} = \frac{(\text{Control Mean Response} - \text{IWC Mean Response})}{\text{Control Mean Response}} * 100$$

#### **Persistent Pollutants**

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

#### **PET Tool**

The PET tool is a Microsoft Excel file that allows the Discharger to configure the data into a format that CIWQS will understand and interpret correctly, which is the CIWQS Data Format, or CDR. The Discharger can open the PET Tool in Excel, configure it on the basis of the Discharger's permit requirements, and then use the configured file as a template for entering data during the different reporting frequency and periods.

#### **Pollutant Minimization Program (PMP)**

PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Colorado River Basin Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

#### **Pollution Prevention**

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change,

operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Board or Colorado River Basin Water Board.

**Potable Water**

Water that is safe for drinking and cooking and is in compliance with the State Water Board Division of Drinking Water or local county health department regulations.

**Public Entity**

Public Entity includes the federal government or a state, county, city and county, city, district, public authority, or public agency.

**Publicly Owned Treatment Works (POTW)**

POTW means a treatment works as defined in 40 C.F.R. 212, which is owned by a State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW Treatment Plant. The term also means the municipality as defined in 40 C.F.R. 502(4), which has jurisdiction over the Indirect Discharges to and the discharges from such a treatment works.

**Quality Assurance (QA)**

Quality assurance is a practice in toxicity testing that addresses all activities affecting the quality of the final effluent toxicity data. QA includes practices such as effluent sampling and handling, source and condition of test organisms, equipment condition, test conditions, instrument calibration, replication, use of reference toxicants, recordkeeping, and data evaluation.

**Quality Control (QC)**

Quality control is the set of more focused, routine, day-to-day activities carried out as part of the overall QA program.

**Reference Toxicant Test**

Reference toxicant test is a check of the sensitivity of the test organisms and the suitability of the test methodology. Reference toxicant data is part of a routine QA/QC program to evaluate the performance of laboratory personnel and the robustness and sensitivity of the test organisms.

**Replicate**

Replicate is two or more independent organism exposures of the same treatment (i.e., effluent concentration) within a whole effluent toxicity test. Replicates are typically separate test chambers with organisms, each having the same effluent concentration.

**Report of Waste Discharge**

For the purposes of this Individual Board Order, references to the Report of Waste Discharge (ROWD) shall include the California Form 200, USEPA forms and any other application information submitted to the Colorado River Basin Water Board.

**Reporting Level (RL)**

The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Colorado River Basin Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3

of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

### **Sample**

Sample is a representative portion of a specific environmental matrix that is used in toxicity testing.

### **Satellite Collection System**

The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

### **Serious Violation**

For discharges of pollutants subject to the State Water Board's "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California," or the "California Ocean Plan," where the effluent limitation for a pollutant is lower than the applicable Minimum Level, any discharge that: (1) equals or exceeds the Minimum Level; and (2) exceeds the effluent limitation by 40 percent or more for a Group 1 pollutant or by 20 percent or more for a Group 2 pollutant, is a serious violation for the purposes of California Water Code section 13385(h)(2).

For discharges of pollutants that are not subject to the State Water Board's "Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California," or the California Ocean Plan (e.g., pollutants that are not addressed by the applicable plan) where the effluent limitation for a pollutant is lower than the quantification limit specified or authorized in the applicable waste discharge requirements or monitoring requirements, any discharge that: (1) equals or exceeds the quantification limit; and (2) exceeds the effluent limitation by 40 percent or more for a Group 1 pollutant or by 20 percent or more for a Group 2 pollutant, is a serious violation for the purposes of California Water Code section 13385(h)(2).

### **Sewage Sludge**

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works. Sewage sludge that has been classified as hazardous shall be disposed in accordance with 40 C.F.R. 261.

### **Sewage Sludge, Class A**

Sewage Sludge to be classified Class A with respect to pathogens shall comply with the requirements in 40 C.F.R. 503.32(a)(2) and the requirements in either 40 C.F.R. 503.32(a)(3), (a)(4), (a)(5), (a)(6), (a)(7), or (a)(8).

### **Sewage Sludge, Class B**

Sewage Sludge to be classified Class B with respect to pathogens shall comply with the requirements in either 40 C.F.R. 503.32(b)(2), (b)(3), or (b)(4).

### **Significant Difference**

Significant difference is a statistically significant difference (e.g., 95 percent confidence level) in the means of two distributions of sampling results.

## Significant Expansion

Significant expansion means an increase in permitted design flow of greater than 10% or changes to the Facility and/or changes in the nature and character of the discharge that may result in an incremental increase in pollutants discharged to the receiving water body of greater than 10% of the permitted discharge rates. When a new or existing facility undergoes significant expansion, the discharge shall be evaluated on a pollutant by pollutant basis.

## Significant Figures

Significant figures of a number are those digits that carry meaning contributing to its precision. When adding or subtracting values with different degrees of precision, the last digit retained is determined by the least precise number (i.e., the answer should contain no digits farther to the right of the least precise number). For example:

$$\begin{array}{r} 37.24 \\ +10.3 \\ \hline 47.54 \end{array}$$

is rounded to 47.5

When multiplying or dividing values with different degrees of precision, the number of significant figures in the answer equals that of the quantity that has the smallest number of significant figures. For example:

$$\overbrace{113.2}^4 \times \overbrace{1.43}^3 = \overbrace{161.876}^6 \quad \text{is rounded to } \overbrace{162}^3$$

1. Additional Information on significant figures.
  - a. All nonzero digits are significant.
  - b. Zeros between nonzero digits are significant (e.g., 1.005 mg has four significant figures).
  - c. When a number ends in zeros to the right of a decimal point, they are significant (0.00500 has three significant figures).
  - d. When a number ends in zeros that are not to the right of a decimal point, significant figures are indeterminable (e.g., 10300 kg).
  - e. Only measurements have a limited number of significant figures. Given values, constants, etc. are assumed to have an infinite number of significant figures.
  - f. In addition, 40 C.F.R. part 136 specifies for some analytical methods, the number of significant figures to which measurements are made. The Discharger shall ensure laboratory analytical results are consistent with the requirements contained in 40 C.F.R. part 136 with regard to significant figures.

## Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) in the Colorado River Basin Water Board's Basin Plan.

## Standard Deviation ( $\sigma$ )

Standard Deviation is a measure of variability that is calculated as follows:

$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

where:  
x is the observed value;

$\mu$  is the arithmetic mean of the observed values; and  
 $n$  is the number of samples.

### **State Implementation Policy (SIP)**

The Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

### **Statistic**

Statistic is a computed or estimated quantity such as the mean, standard deviation, or Coefficient of Variation.

### **Technology-Based Effluent Limitation**

A technology-based effluent limitation is a permit limit for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

### **Teratogenic**

Teratogenic pollutants are substances that are known to cause structural abnormalities or birth defects in living organisms.

### **Test Acceptability Criteria (TAC)**

Test acceptability criteria are test method-specific criteria for determining whether toxicity test results are acceptable. The effluent and reference toxicant must meet specific criteria as defined in the test method (e.g., for the Ceriodaphnia dubia survival and reproduction test, the criteria are as follows: the test must achieve at least 80 percent survival and an average of 15 young per surviving female in the control and at least 60% of surviving organisms must have three broods).

### **Total Maximum Daily Load (TMDL)**

A TMDL is the sum of the individual waste load allocations and load allocations for receiving water. A margin of safety is included with the two types of allocations so that any additional loading, regardless of source, would not produce a violation of water quality standards.

### **Total Solids**

Total Solids are the materials that remain as residue when dried at 103 to 105 degrees Celsius.

### **Toxicity Reduction Evaluation (TRE)**

TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of Facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

### **Toxicity Test**

Toxicity test is a procedure to determine the toxicity of a chemical or an effluent using living organisms. A toxicity test measures the degree of effect on exposed test organisms of a specific chemical or effluent.

### **Treatment Works**

Treatment works is either a federally-owned, publicly-owned, or privately-owned device or system used to treat (including recycling and reclamation) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

**t-Test**

t-Test (formally Student's t-Test) is a statistical analysis comparing two sets of replicate observations, in the case of WET, only two test concentrations (e.g., a control and IWC). The purpose of this test is to determine if the means of the two sets of observations are different (e.g., if the 100-percent effluent or ambient concentration differs from the control [i.e., the test passes or fails]). The statistical significance (i.e., pass/fail) of a two-sample test can be determined with either a standard t-test (if homogeneity of variance is achieved) or a modified t-test (if homogeneity of variance is not achieved) and where:

**Type I Error (alpha  $\alpha$ )** is the error of rejecting the null hypothesis ( $H_0$ ) that should have been accepted, and

**Type II Error (beta  $\beta$ )** is the error of accepting the null hypothesis ( $H_0$ ) that should have been rejected.

**Vector Attraction**

Vector Attraction is the characteristic of a material that attracts rodents, flies, mosquitoes, or other organisms capable of transporting infectious agents.

**Waste Load Allocation (WLA)**

The portion of a receiving water's total maximum daily load that is allocated to one of its existing or future point sources of pollution.

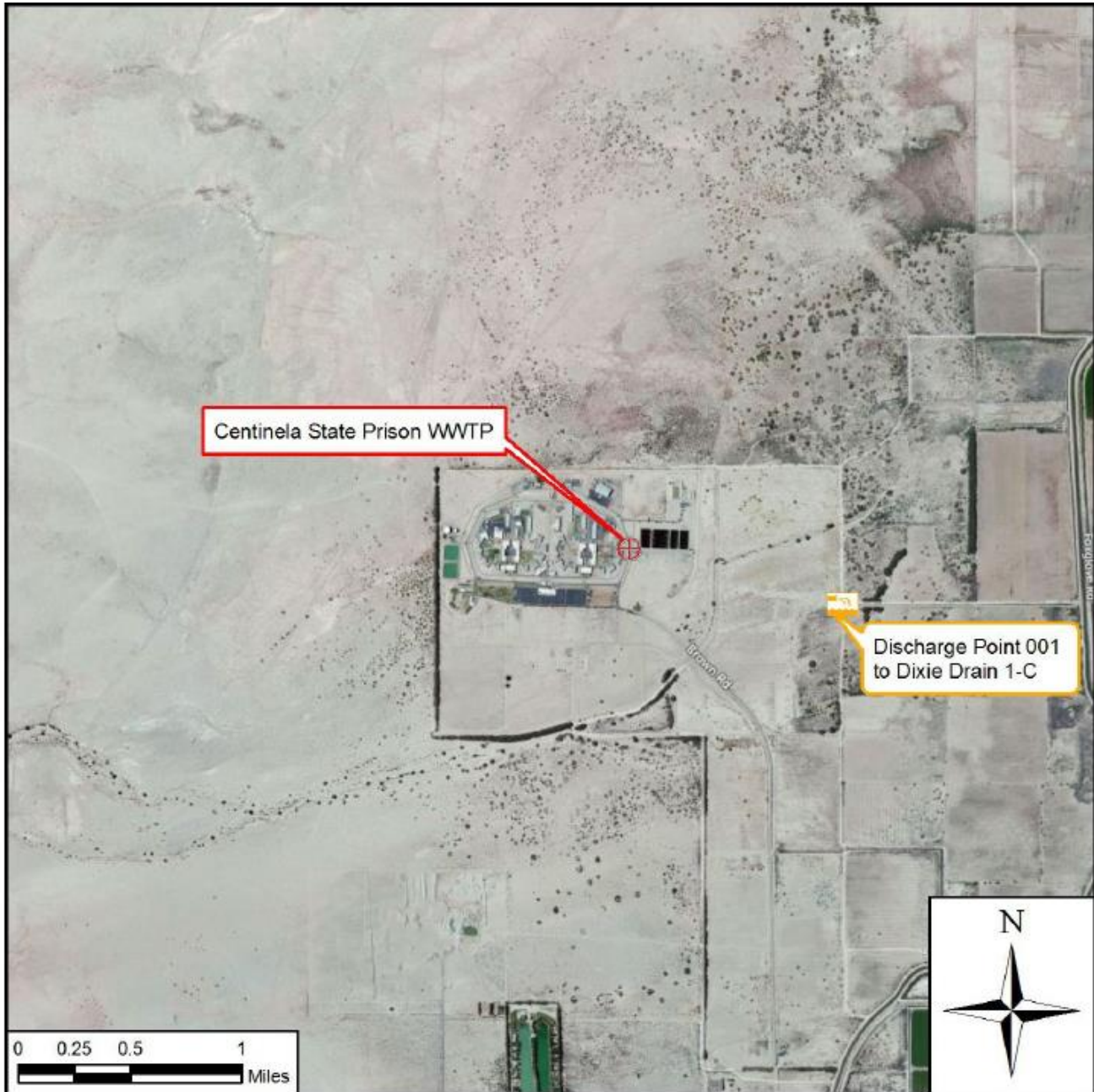
**Welch's t-Test**

Welch's t-Test is an adaptation of the Student's t-test intended for use with two samples having unequal variances.

**Whole Effluent Toxicity (WET)**

The aggregate toxic effect of an effluent measured directly by a toxicity test.

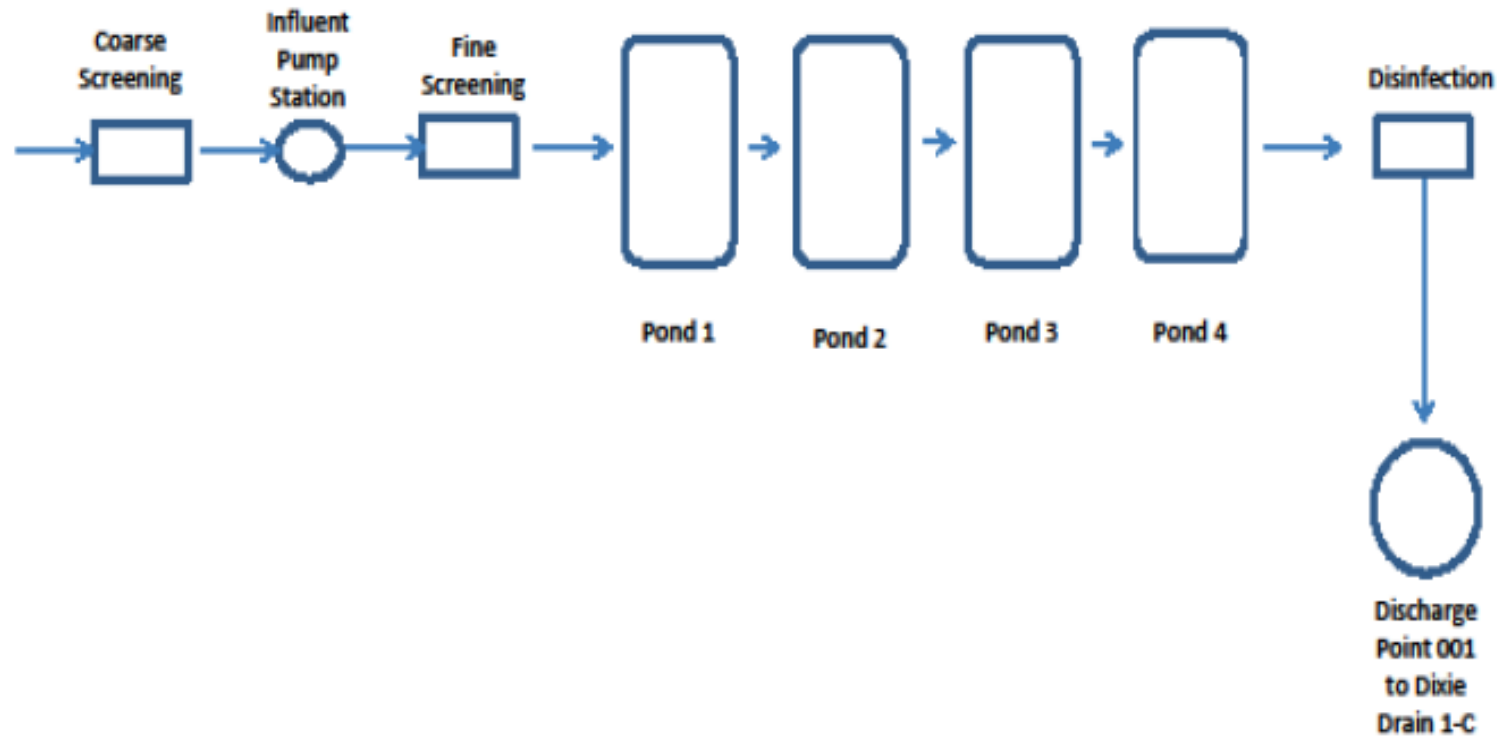
## ATTACHMENT B – MAP



CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION,  
OWNER/OPERATOR;  
CENTINELA STATE PRISON WASTEWATER TREATMENT PLANT;  
Imperial, Imperial County

Location of Discharge: N ½ of Section 36, T15S, R11E, SBB&M

## ATTACHMENT C – FLOW SCHEMATIC





## **ATTACHMENT D – STANDARD PROVISIONS**

### **I. STANDARD PROVISIONS – PERMIT COMPLIANCE**

#### **A. Duty to Comply**

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Discharger shall comply with effluent standards or prohibitions established under section 307(a) of the Clean Water Act for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

#### **B. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

#### **C. Duty to Mitigate**

The Discharger shall take all reasonable steps to minimize or prevent any discharge in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

#### **D. Proper Operation and Maintenance**

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

#### **E. Property Rights**

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

#### **F. Inspection and Entry**

The Discharger shall allow the Colorado River Basin Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(2); Wat. Code, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 C.F.R. § 122.41(i)(3); Wat. Code, §§ 13267, 13383); and
4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the Clean Water Act or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

## **G. Bypass**

### **1. Definitions**

- a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
  - b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Colorado River Basin Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
- a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
  - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
  - c. The Discharger submitted notice to the Colorado River Basin Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
4. The Colorado River Basin Water Board may approve an anticipated bypass, after considering its adverse effects, if the Colorado River Basin Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
5. Notice
- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. As of December 21, 2020, all notices must be submitted electronically by the Discharger to

the initial recipient, as defined in 40 C.F.R. section 127.2(b), in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 C.F.R. § 122.41(m)(3)(i).)

- b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). As of December 21, 2020, all notices must be submitted electronically by the Discharger to the initial recipient, as defined in 40 C.F.R. section 127.2(b), in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular permit or if required to do so by state law. (40 C.F.R. § 122.41(m)(3)(ii).)

## **H. Upset**

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
  - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
  - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
  - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
  - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

## **II. STANDARD PROVISIONS – PERMIT ACTION**

### **A. General**

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a

notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

**B. Duty to Reapply**

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

**C. Transfers**

This Order is not transferable to any person except after notice to the Colorado River Basin Water Board. The Colorado River Basin Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the Clean Water Act and the Water Code. (40 C.F.R. § 122.41(l)(3); 122.61.)

**III. STANDARD PROVISIONS – MONITORING**

**A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)

**B.** Monitoring must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N or O. For the purposes of this paragraph, a method is sufficiently sensitive when:

1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

**IV. STANDARD PROVISIONS – RECORDS**

**A.** The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Colorado River Basin Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

**B.** Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
  4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
  5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
  6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)
- C.** Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):
1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
  2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

## **V. STANDARD PROVISIONS – REPORTING**

### **A. Duty to Provide Information**

The Discharger shall furnish to the Colorado River Basin Water Board, State Water Board, or USEPA within a reasonable time, any information which the Colorado River Basin Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Colorado River Basin Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 13267, 13383.)

### **B. Signatory and Certification Requirements**

1. All applications, reports, or information submitted to the Colorado River Basin Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(3).)
3. All reports required by this Order and other information requested by the Colorado River Basin Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
  - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
  - c. The written authorization is submitted to the Colorado River Basin Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard

Provisions – Reporting V.B.3 above must be submitted to the Colorado River Basin Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 C.F.R. § 122.22(d).)

6. If documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 are submitted electronically by or on behalf of the NPDES-regulated facility, any person providing the electronic signature for such documents shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the relevant requirements of 40 C.F.R. part 3 (including, in all cases, subpart D of part 3) (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R. § 122.22(e).)

#### **C. Monitoring Reports**

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Colorado River Basin Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including, in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by the permit or if required to do so by state law. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Colorado River Basin Water Board or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

#### **D. Compliance Schedules**

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5).)

#### **E. Twenty-Four Hour Reporting**

1. The Discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)
2. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the noncompliance was related to wet weather. As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically by the Discharger to the initial recipient, as defined in Standard Provisions – Reporting V.J, in compliance with this section and 40 C.F.R. part 3 (including in all cases, subpart D of part 3), section 122.22, and 40 C.F.R. part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to electronically submit reports related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section by a particular permit or if required to do so by state law.
3. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii):
  - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)
  - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(B).)
4. The Colorado River Basin Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

#### **F. Planned Changes**

The Discharger shall give notice to the Colorado River Basin Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii).)
3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application

process or not reported pursuant to an approved land application plan. (40 C.F.R. § 122.41(l)(1)(iii).)

**G. Anticipated Noncompliance**

The Discharger shall give advance notice to the Colorado River Basin Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2).)

**H. Other Noncompliance**

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting, Section V.E above. (40 C.F.R. § 122.41(l)(7).)

**I. Other Information**

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Colorado River Basin Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

**J. Identification of the Initial Recipient for NPDES Electronic Reporting Data**

The owner, operator, or the duly authorized representative of an NPDES-regulated entity is required to electronically submit the required NPDES information (as specified in appendix A to 40 C.F.R. part 127) to the appropriate initial recipient, as determined by USEPA, and as defined in 40 C.F.R. section 127.2(b). USEPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. USEPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9).)

**VI. STANDARD PROVISIONS – ENFORCEMENT**

- A.** The Colorado River Basin Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13385, 13386, and 13387.

**VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS**

**A. Publicly-Owned Treatment Works (POTWs)**

All POTWs shall provide adequate notice to the Colorado River Basin Water Board of the following (40 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the Clean Water Act if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 C.F.R. § 122.42(b)(2).)
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 C.F.R. § 122.42(b)(3).)



## ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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## ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

Section 308 of the federal Clean Water Act and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Colorado River Basin Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

### I. GENERAL MONITORING PROVISIONS

- A. Sample Volume and Monitoring Locations.** Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Colorado River Basin Water Board.
- B. Instrumentation and Calibration.** Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. All flow measurement devices shall be calibrated at least once per year or more frequently, to ensure continued accuracy of the devices. Devices selected shall be capable of measuring flows with a maximum deviation of less than  $\pm 10$  percent from true discharge rates throughout the range of expected discharge volumes.
- C. Laboratory Certification.** Laboratories analyzing monitoring samples shall be certified by the Environmental Laboratory Accreditation Program (ELAP) through the State Water Board, Division of Drinking Water (DDW) in accordance with Water Code section 13176, and must include quality assurance/quality control data with their reports.
- D. Monitoring Test Procedures.** The collection, preservation, and holding times of all samples shall be in accordance with the test procedures under 40 C.F.R. part 136 (amended May 18, 2012) *Guidelines Establishing Test Procedures for the Analysis of Pollutants*, promulgated by the United States Environmental Protection Agency (USEPA), unless otherwise specified in this MRP. In addition, the Colorado River Basin Water Board and/or USEPA, at their discretion, may specify test methods that are more sensitive than those specified in 40 C.F.R part 136.
- E. General Analytical Testing Methods.** The Discharger must utilize analytical methods as follows:
  - 1. A test procedure listed in 40 C.F.R. section 136.3; or
  - 2. An alternative test procedure approved by USEPA as provided in 40 C.F.R. sections 136.4 or 136.5; or
  - 3. A test procedure listed in 40 C.F.R. part 136, with modifications allowed by USEPA as provided in 40 C.F.R. section 136.6.

Guidance on procedures for approval of alternative and new test procedures can be obtained from the following references: *Protocol for EPA Approval of Alternative Test Procedures for Organic and Inorganic Analytes in Wastewater and Drinking Water* (EPA 821-B-98-002, March 1999); and *Protocol for EPA Approval of New Methods for Organic and Inorganic Analytes in Wastewater and Drinking Water* (EPA 821-B-98-003, March 1999).

**F. Minimum Levels (ML) for Priority Pollutants.** For priority pollutants, the Discharger shall require its testing laboratory to calibrate the analytical system down to the minimum levels (MLs) specified in 40 C.F.R. part 136, unless an alternative minimum level is approved by the Colorado River Basin Water Board's Executive Officer.

**G. Analytical Testing Methods for Metals.** In conformance with 40 C.F.R. section 122.45(c), analyses to determine compliance with the effluent limitations for metals shall be conducted using the total recoverable method. For Chromium (VI), the dissolved method in conformance with 40 C.F.R. part 136 shall be used to measure compliance with a Chromium (VI) effluent limitation.

For Cyanide,<sup>1</sup> analytical test methods in conformance with 40 C.F.R. part 136 shall be used as acceptable methods to measure Cyanide.<sup>2</sup>

**H. Quality Assurance Plan (QAP).** In accordance with the test procedures under 40 C.F.R. part 136, samples shall be analyzed as soon as possible after collection. The Discharger shall develop and implement a written Quality Assurance Plan (QAP) for samples that are analyzed on-site. The QAP shall at a minimum address the following steps:

1. Provide a description of Standard Operating Procedures (SOPs);
2. Provide an overview of the task description and objectives;
3. Identify the sampling process, method and handling;
4. Identify the instrumentation/equipment testing, inspection and maintenance;
5. Identify the instrumentation/equipment calibration and frequency;
6. Identify the sample analysis methods and calibration range; and
7. Summarize the data review and validation procedures.

**I. Failure of Continuous Monitoring Instruments/Devices.** All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. In the event that continuous monitoring equipment is out of service for a period greater than 24 hours, the Discharger shall obtain representative grab samples each day the equipment is out of service. The Discharger shall correct the cause(s) of failure of the continuous monitoring equipment as soon as practicable. The Discharger shall report the period(s) during which the equipment was out of service and if the problem has not been corrected, shall identify the steps which the Discharger is taking or proposes to take to bring the equipment back into service and the schedule for these actions.

**J. Reporting Intervals.** Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this MRP. Whenever the Discharger monitors any pollutant more

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<sup>1</sup> The sample for cyanide measurement shall be collected as a grab sample. Various sample preservation and sample stabilization procedures are available that may resolve analytical interferences associated with cyanide analysis of treated wastewater effluent, ASTM Standard Practice D7365-09a. Further, any technique for removal or suppression of interferences may be employed, provided the laboratory demonstrates that it more accurately measures cyanide through quality control measures described in the analytical test method. Any removal or suppression technique not described in D7365-09a or the analytical test method must be documented with supporting data.

<sup>2</sup> Federal Register, Vol. 77, No. 97, May 18, 2012. Cyanide exists in a variety of forms. It can be free or part of strong or weak complexes with other species. The analytical method employed determines what type of cyanide is measured. Types of cyanide measured include: Total, Available, Amenable to Chlorination, Weak Acid Dissociable, Free, and others.

frequently than is required by this Order, the results of this monitoring shall be included in the regular discharge monitoring reports.

**K. Non-operation of Facility and/or No Discharge.** If the Facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall indicate that there has been no activity during the required reporting period in CIWQS.

**L. Electronic Self-Monitoring Reports (eSMRs).** The Discharger shall submit values in eSMR as required to determine compliance with the permit effluent limit requirements (e.g., AMEL, MDEL, % removals, geomeans, mass loadings, etc.) in the California Integrated Water Quality System (CIWQS) Program, as specified below in Section X.B. The Discharger shall submit the eSMR for reporting period May and Second Quarter 2018 in the eSMR module for Order No. R7-2013-0009 in the CIWQS Program.

**M. Discharge Monitoring Report - Quality Assurance (DMR-QA) Study.** The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

State Water Resources Control Board  
Quality Assurance Program Officer  
Office of Information Management and Analysis  
1001 I Street, Sacramento, CA 95814

## II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

**Table E-1. Monitoring Station Locations**

Discharge Point Name	Monitoring Location <sup>1</sup> Name	Monitoring Location Description
---	INF-001	Wastewater influent to the treatment facility. The sampling station shall be located upstream of any in-plant return flows where a representative influent sample to the treatment plant can be obtained.
001	EFF-001	Effluent discharged from the treatment facility shall be monitored at the inlet of the outlet pipe to the receiving water (Dixie Drain 1-C) where representative samples of the effluent can be obtained; Latitude 32°49' 23" N and Longitude 115° 46' 47" W.
---	RSW-001	Receiving water (Dixie Drain 1-C) monitoring location not to exceed 100 feet upstream from the location where the effluent enters the Dixie Drain 1-C. However, the effluent enters the Dixie Drain 1-C at the beginning of the drain; therefore, there is no upstream receiving water flow available for monitoring.
---	RSW-002	Receiving water (Dixie Drain 1-C) monitoring location not to exceed 200 feet downstream from the location where the effluent enters the Dixie Drain 1-C; Latitude 32°49' 12" N and Longitude 115° 46' 12" W.

<sup>1</sup> The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

## III. INFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location INF-001

1. The Discharger shall monitor influent at INF-001 as follows:

**Table E-2. Influent Monitoring**

Parameter	Units	Sample Type	Minimum Frequency	Sampling	Required Analytical Test Method
Flow	MGD	Recorder/Totalizer	Continuous		See Section I.B of the MRP
Biochemical Oxygen Demand (BOD <sub>5</sub> ) (5 day @ 20 Deg. C)	mg/L	24-Hr. Composite	1x/Week		See Section I.E and I.F of the MRP
	lbs/day	Calculated			
Suspended Solids, Total (TSS)	mg/L	24-Hr. Composite	1x/Week		"
	lbs/day	Calculated			

#### IV. EFFLUENT MONITORING REQUIREMENTS

##### A. Monitoring Location EFF-001

- The Discharger shall monitor secondary treated wastewater effluent at Monitoring Location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level (ML):

**Table E-3. Effluent Monitoring at EFF-001**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Flow Meter (Totalizer) Reading/Calculation	1x/Day <sup>1</sup>	See Section I.B of the MRP
Chlorine, Total Residual	mg/L	Recorder	Continuous <sup>2</sup>	See Section I.E and I.F of the MRP
	lbs/day	Calculated		---
Escherichia coli ( <i>E. coli</i> )	MPN/100 ml	Grab	5x/Month <sup>3</sup>	<sup>4</sup>
Enterococci	MPN/100 ml	Grab	5x/Month <sup>3</sup>	See Section I.E and I.F of the MRP
Fecal coliform	MPN/100 ml	Grab	5x/Month <sup>3</sup>	"
pH	Standard Units	Grab	1x/Week	"
Temperature	°F	Grab	1x/Week	"
Dissolved oxygen	mg/L	Grab	1x/Week	"
Ammonia, Total as Nitrogen	mg/L	Grab	1x/Week	"
20°C BOD <sub>5</sub>	mg/L	24-Hr. Composite <sup>5</sup>	1x/Week	"
	lbs/day	Calculated		
TSS	mg/L	24-Hr. Composite	1x/Week	"
	lbs/day	Calculated		
Copper, Recoverable Total	µg/L	Grab	1x/Month	See Sections I.E, I.F, I.G, and I.H of the MRP
	lbs/day	Calculated		
alpha-BHC	µg/L	Grab	1x/Month	See Sections I.E, I.F, and I.G of the MRP
	lbs/day	Calculated		
Hardness, Total (as CaCO <sub>3</sub> )	mg/L	Grab	1x/Quarter	See Section I.E and I.F of the MRP
Dissolved Solids, Total	mg/L	24-Hr. Composite	1x/Quarter	"

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Nitrates, as N	mg/L	24-Hr. Composite	1x/Quarter	"
Nitrites, as N	mg/L	24-Hr. Composite	1x/Quarter	"
Total Kjeldahl Nitrogen TKN, as N	mg/L	24-Hr. Composite	1x/Quarter	"
Phosphorus, Total as P	mg/L	24-Hr. Composite	1x/Quarter	"
Ortho-Phosphate, as P	mg/L	24-Hr. Composite	1x/Quarter	"
Oil and Grease <sup>6</sup>	mg/L	Grab	1x/Year	"
	lbs/day	Calculated		
Priority Pollutants <sup>7</sup>	µg/L	Grab	1x/Year	See Section I.G of the MRP

<sup>1</sup> Report total daily flow. The Discharger calculates the daily effluent flow from daily readings taken from the effluent flow totalizer.

<sup>2</sup> Continuous sampling or a minimum of three grab samples performed daily and the average and maximum daily results shall be uploaded into CIWQS. The Discharger shall also follow all monitoring and reporting requirements described in Section VII.N, Compliance Determination for Total Residual Chlorine Effluent Limitations.

<sup>3</sup> Five samples equally spaced over a 30-day period with a minimum of one sample per week.

<sup>4</sup> The Discharger may monitor for *E. coli* using analytical methods, Standard Method 9221.F or 9223 (APHA. 1998, 1995, 1992. Standard Methods for the Examination of Water and Wastewater. American Public Health Association, 20<sup>th</sup>, 19<sup>th</sup>, and 18<sup>th</sup> Editions. Amer. Publ. Hlth. Assoc., Washington D.C.)

<sup>5</sup> 24-hour composite samples shall be time-proportionate composite samples.

<sup>6</sup> Total oil and grease shall include the polar and non-polar fraction of oil and grease materials.

<sup>7</sup> All Priority Pollutants as defined by the California Toxics Rule (CTR), codified at 40 C.F.R. section 131.38.

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

### A. Chronic Toxicity Testing

- 1. Discharge In-stream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC for this discharge is 100 percent effluent.
- 2. Sample Volume and Holding Time.** The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.
- 3. Test Methods.** The Discharger shall conduct the following chronic toxicity tests on effluent samples at the in-stream waste concentration for the discharge in accordance with species and test protocols in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA 821-R-02-013, 2002).
- 4. Test Species.** The Discharger shall conduct static renewal toxicity tests, with the fathead minnow (*Pimephales promelas*), (Larval Survival and Growth Test Method 1000.0) and the water flea (*Ceriodaphnia dubia*), (Survival and Reproduction Test Method 1002.0); and static tests with the green alga (*Selenastrum capricornutum*), (Growth Test Method 1003.0). In no case shall these species be substituted with another test species unless written authorization from the Colorado River Basin Water Board is received.
- 5. Discharge Collected at Monitoring Stations.** The Discharger shall conduct chronic toxicity testing on the final effluent measured at Monitoring Location EFF-001 as follows:

**Table E-4. Whole Effluent Toxicity Test Species**

Test (s)	Species	Endpoints	Test Duration (days)	References	Sample Type	Minimum Sampling Frequency <sup>1</sup>
Chronic	Fathead Minnow ( <i>Pimephales promelas</i> ) <sup>2</sup>	Larval Survival and Growth	7	EPA 821-R-02-013 (Chronic) EPA Method 1000.0	24-Hr. Composite	4x/Year <sup>3</sup>
Chronic	Water Flea ( <i>Ceriodaphnia dubia</i> ) <sup>2</sup>	Survival and Reproduction	6-8 <sup>4</sup>	EPA 821-R-02-013 (Chronic) EPA Method 1002.0	24-Hr. Composite	4x/Year <sup>3</sup>
Chronic	Green Alga ( <i>Selenastrum capricornutum</i> ) <sup>2</sup>	Growth	4	EPA 821-R-02-013 (Chronic) EPA Method 1003.0	24-Hr. Composite	4x/Year <sup>3</sup>

<sup>1</sup> The reporting period will match the sampling frequency (e.g., minimum sampling frequency is monthly then the reporting period is monthly, minimum sampling frequency is quarterly then reporting period is quarterly, etc.)

<sup>2</sup> For the fathead minnow and the water flea, the sample should consist of three water samples collected on three separate days as noted in the method. The green algae test uses only one sample, as it is a shorter test.

<sup>3</sup> The screening phase (conducted during the first and fourth years of the permit term) shall be completed after a minimum of one (1) toxicity test has been completed on the three test species. The monitoring phase shall be conducted after the initial screening and during the remaining years (i.e., second, third, and fifth years of the permit term), using the most sensitive species.

<sup>4</sup> Test duration is determined by production of 3<sup>rd</sup> brood by control and can be between 6 and 8 days.

**6. Species Sensitivity Screening.** During the first and fourth years of the permit term, the toxicity testing shall be conducted in two phases, the screening phase and the monitoring phase.

- For the screening phase, the Discharger shall split a 24-hour composite effluent sample and conduct concurrent toxicity tests using a fish, an invertebrate and an aquatic plant species. The fathead minnow (*Pimephales promelas*), water flea (*Ceriodaphnia dubia*), and green alga (*Selenastrum capricornutum*) are the test species approved by the Colorado River Basin Water Board's Executive Officer.
- The screening phase is completed by selecting the most sensitive species. The most sensitive species is the fish, invertebrate, or algal species which consistently demonstrates the largest percent effect level at the In-stream Waste Concentration<sup>3</sup> (IWC), where: IWC percent effect level =  $[(\text{Control mean response} - \text{IWC mean response}) \div \text{Control mean response}] \times 100$ .
- After the screening phase, the permittee shall then continue to conduct toxicity testing during the monitoring phase using the single, most sensitive species until the next screening phase. An example of a sensitivity comparison is shown in Table E-5.

**Table E-5. Example of Screening Table for Chronic Test**

Species	Endpoints	Mean Control Response	Mean Response at IWC (100% effluent)	% effect at IWC (100% effluent)	Most Sensitive Species
Fathead Minnow	Larval Survival	10	10	$(10 - 10)/10 \times 100 = 0\%$	

<sup>3</sup> Mixing zones or dilution credits are not authorized for this discharger and 100% effluent will be considered the IWC.

Species	Endpoints	Mean Control Response	Mean Response at IWC (100% effluent)	% effect at IWC (100% effluent)	Most Sensitive Species
Fathead Minnow	Growth	0.41	0.363	$(0.41-0.363)/.41 \times 100 = 11.5\%$	
Water Flea	Survival	10	9	$(10-9)/10 \times 100 = 10\%$	
Water Flea <sup>1</sup>	Reproduction	33.4	26.7	$(33.4-26.7)/33.4 \times 100 = 20\%$	Highest % effect represents most sensitive species <sup>1</sup>
Green Alga	Growth	197.3	170.1	$(197.3-170.1)/197.3 \times 100 = 13.8\%$	

<sup>1</sup> In this example, the water flea represents the most sensitive species. Chronic tests for the water flea shall be conducted as required by measuring and reporting the endpoints for survival and reproduction during the monitoring phase at 100 percent IWC effluent.

**7. Quality Assurance and Additional Requirements.** Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are below.

- a. The discharge is subject to determination of “Pass” or “Fail” from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

- b. The null hypothesis (Ho) for the TST statistical approach is:

Mean discharge IWC response  $\leq 0.75 \times$  Mean control response.

A test result that rejects this null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.”

- c. The relative “Percent Effect” at the discharge IWC is defined and reported as:

Percent Effect =  $((\text{Mean control response} - \text{Mean discharge IWC response}) / \text{Mean control response}) \times 100$ .

This is a t-test (formally Student’s t-Test), a statistical analysis comparing two sets of replicate observations, i.e., a control and IWC. The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control, the test result is “Pass” or “Fail”). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

- d. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method in EPA 821-R-02-013 (see Table E-4), then the Discharger must resample and re-test within 14 days.



**Table E-6. TAC Specified in EPA/821-R-02-013**

<b>Species and End Points</b>	<b>EPA/821-R-02-013 Test Method</b>	<b>Test Acceptability Criteria (TAC)</b>
Fathead Minnow <i>Larval Survival and Growth</i>	1000.0, Table 1	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg. (required)
Water Flea <i>Survival and Reproduction</i>	1000.2, Table 3	80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions. 60% of surviving control females must produce three broods. (required)
Green Algae <i>Growth</i>	1000.3, Table 3	Mean cell density of at least 1 X 10 <sup>6</sup> cells/mL in the controls; and variability (CV%) among control replicates less than or equal to 20%. (required)

- e. Dilution water and control water shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.
- f. The Discharger shall perform toxicity tests on final effluent samples. Chlorine in the final effluent sample may be removed prior to conducting toxicity tests in order to simulate the dechlorination process at the Facility. However, ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized by the Executive Officer.
- g. A pH drift during a toxicity test may contribute to artifact toxicity when pH-dependent toxicants (e.g., ammonia, metals) are present in the effluent. To determine whether or not pH drift is contributing to artifact toxicity, the Discharger shall conduct side-by-side toxicity tests as described in Section 11.3.6.1 of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA 821 R-02 013, 2002).

The Discharger can confirm toxicity is due to pH drift when the Discharger observes no toxicity above the chronic WET permit limit or trigger in the treatments controlled at the pH of the effluent. Upon this confirmation, the Discharger shall request and, upon written approval by the Colorado River Basin Water Board's Executive Officer, the Discharger may use the procedures outlined in Section 11.3.6.2 of the manual to control effluent sample pH during the toxicity test.

**8. Accelerated Monitoring Requirements.** Accelerated monitoring for chronic toxicity is triggered when a chronic toxicity test, analyzed using the TST approach, results in "Fail" and the testing meets all test acceptability criteria.

**a. Source of Toxicity is Known**

If the chronic WET testing results are reported as "Fail" and the source of toxicity is known (e.g., a temporary plant upset, ammonia, ionic imbalance or elevated total dissolved solids [TDS]), then the Discharger shall conduct one additional toxicity test. The Discharger shall use the same species and test method that failed the WET test. This toxicity test shall begin within 14 days of receipt of a test result as "Fail." If the additional toxicity test result is reported as a "Pass" or it is confirmed that the toxicity is due to temporary plant upset, ammonia, ionic imbalance or elevated TDS, then the Discharger may return to the regular testing frequency.

**b. Source of Toxicity is Not Known**

If the chronic WET testing results are reported as “Fail” and the source of toxicity is not known, then the Discharger shall conduct four additional toxicity tests using the same species and test method, approximately every two weeks, over an eight-week period. This testing shall begin within 14 days of receipt of a test result as “Fail.” If none of the additional toxicity test results are reported as “Fail,” then the Discharger may return to the regular testing frequency.

**c. Initiation of Toxicity Reduction Evaluation (TRE)**

If any accelerated toxicity test results in “Fail,” the Discharger shall cease accelerated monitoring and begin a TRE (as specified in Section V.B below) to investigate the cause(s) of effluent toxicity and to identify corrective actions to reduce or eliminate that toxicity.

**B. Toxicity Reduction Evaluation (TRE) Process**

- 1. Preparation of a TRE Work Plan.** The Discharger shall prepare and submit a copy of the Discharger’s Toxicity Reduction Evaluation (TRE) work plan to the Colorado River Basin Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Discharger shall use USEPA manual EPA/833B-99/002 (municipal) as guidance, or most current version. This work plan shall describe the steps that the Discharger intends to follow if toxicity is detected. At a minimum, the work plan shall include:
  - a. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.
  - b. A description of the Facility’s methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and
  - c. If a Toxicity Identification Evaluation (TIE) is necessary, an indication of the person who would conduct the TIEs (i.e., an in-house expert or an outside contractor).
- 2. Preparation and Implementation of Detailed TRE Work Plan.** If one of the accelerated toxicity tests described in Section V.A.8, above, results in “Fail,” the Discharger shall immediately initiate the TRE Work Plan developed pursuant to Section V.B.1, and within 30 days, submit to the Colorado River Basin Water Board a Detailed TRE Work Plan, which shall follow the generic TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with any additional conditions set by the Executive Officer:
  - a. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.
  - b. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.
  - c. A schedule for these actions, progress reports, and the final report.
- 3. Toxicity Investigation Evaluation (TIE) Implementation.** The Discharger may initiate a TIE as part of a TRE to identify the causes of toxicity using the same species and test methods and, as guidance, the procedures recommended by the USEPA, which include the following:
  - a. *Toxicity Identification Evaluations: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005F, 1992);

- b. *Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures* (EPA/600/6-91/003, 1991);
- c. *Methods for Aquatic Toxicity Identification Evaluations, Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/080, 1993); and
- d. *Methods for Aquatic Toxicity Identification Evaluations, Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity* (EPA/600/R-92/081, 1993).

**4. Evaluation of Ammonia Toxicity.** For discharges where ammonia has been identified as a cause of toxicity, the Discharger shall calculate the response threshold on the basis of unionized and total ammonia. The Discharger shall run a parallel test with ammonia in lab water to evaluate if the lab water and the effluent responses are the same (i.e., no matrix effect). In future WET testing, where ammonia toxicity is hypothesized as the cause, the Discharger has the following three options to evaluate whether ammonia is causing the toxicity:

- a. If toxicity in lab water is similar to that in the effluent, the Discharger shall conduct a parallel test with ammonia spiked into lab water. Toxicity endpoints are compared on the basis of unionized ammonia. If the endpoints are the same, then the implication is ammonia is responsible for toxicity and no further action is required; or
- b. If toxicity in lab water is not similar to that in the effluent, the Discharger shall conduct a parallel test with effluent, maintaining pH at a level that maintains the unionized fraction below the toxic threshold. If no toxicity is observed in the pH-controlled sample, then implication is that ammonia is responsible for toxicity and no further action is required; or
- c. Without using comparative tests, calculate toxicity in the sample on the basis of unionized ammonia and compare the result to data generated in the TIE; if the results support the hypothesis that ammonia explains toxicity, then no further action is required.

However, if ammonia is not identified as the toxicant, the Discharger shall take action as described in Section V.A.8 (Accelerated Monitoring Schedule) of this MRP.

**5. Evaluation of Ionic Imbalances or Elevated TDS Toxicity.** For discharges where ionic imbalance or elevated TDS has been identified as a cause of toxicity, the Discharger shall conduct the following concurrent tests to characterize the contribution of ionic imbalance or elevated TDS to effluent toxicity. Based on the test results, toxicity should be either quantitatively recovered in synthetic effluent that mimics ionic imbalance or elevated TDS, or eliminated by adding selected ions to the effluent to address deficiencies. Thus, in future WET testing, where ionic imbalance or elevated TDS is hypothesized as contributing to toxicity, the Discharger has the following two options to evaluate whether ionic imbalance or elevated TDS is causing the toxicity:

- a. Conducting a parallel test with synthetic effluent that mimics the ionic imbalance or TDS concentration; or
- b. Conducting a parallel test with effluent spiked with deficient ion(s).

Using these approaches, if ionic imbalance or elevated TDS is shown to account for toxicity, the Discharger shall document the results and findings in the monitoring report and no further testing is required. However, if the parallel tests do not account for toxicity, the Discharger shall take action as described in Section V.A.8 (Accelerated Monitoring Schedule) of this MRP.

### C. Reporting of Toxicity Monitoring Results

1. The Discharger shall submit either a summary page or the full laboratory report for all toxicity testing as an attachment to CIWQS for the reporting period (e.g., monthly, quarterly, semi-annually or annually) and provide the data (i.e., Pass/Fail) in the PET tool for uploading into CIWQS. The laboratory report shall include:
  - a. The valid toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent Effect” at the toxicity IWC for the discharge, the dates of sample collection and initiation of each toxicity test, all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE investigations.
  - b. The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.
  - c. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.
  - d. **TRE/TIE results.** The Colorado River Basin Water Board shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TIE/TRE report, the Discharger shall provide status updates in the monthly monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.
  - e. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon written request from the Colorado River Basin Water Board.

### VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

### VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

### VIII. RECEIVING WATER MONITORING REQUIREMENTS

#### A. Monitoring Location RSW-001 – Not Applicable

#### B. Monitoring Location RSW-002

1. The Discharger shall monitor Dixie Drain 1-C at Monitoring Location RSW-002 as follows. In the event that no receiving water is present at Monitoring Location RSW-002, no receiving water monitoring data is required for Monitoring Location RSW-002.

**Table E-7. Receiving Water Monitoring Requirements – RSW-002**

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard Units	Grab	1x/Quarter	See Section I.F of the MRP
Temperature	°F	Grab	1x/Quarter	”
Dissolved Oxygen	mg/L	Grab	1x/Quarter	”
Total Dissolved Solids	mg/L	Grab	1x/Quarter	”
Total Hardness (as CaCO <sub>3</sub> )	mg/L	Grab	2x/Year	”
Nitrates, as N	mg/L	Grab	2x/Year	”
Nitrites, as N	mg/L	Grab	2x/Year	”
Total Ammonia, as N	mg/L	Grab	2x/Year	”
Total Kjeldahl Nitrogen TKN, as N	mg/L	Grab	2x/Year	”

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Phosphorus, as P	mg/L	Grab	2x/Year	"
Ortho-Phosphate, as P	mg/L	Grab	2x/Year	"
Escherichia coli ( <i>E. coli</i> ) <sup>1</sup>	MPN/100 ml	Grab	2x/Year <sup>1</sup>	"

<sup>1</sup> The first sample should be collected between January 1 through June 30 and the second sample collected between July 1 through December 31.

### C. Visual Monitoring

1. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions at Monitoring Location RSE-001 and RSW-002. Notes on receiving water conditions shall be summarized in the monthly monitoring report and when data is submitted electronically via the SMR module in the CIWQS Program, data shall be reported in the "Attachments" section. Attention shall be given to the presence or absence of:
  - a. Floating or suspended matter;
  - b. Discoloration;
  - c. Aquatic life (including plants, fish, shellfish, birds);
  - d. Visible film, sheen, or coating;
  - e. Fungi, slime, or objectionable growths; and
  - f. Potential nuisance conditions.

## IX. OTHER MONITORING REQUIREMENTS

### A. Pretreatment Monitoring

In the event that significant industrial wastewater is being discharged to the wastewater treatment facility, then the Discharger shall provide the Colorado River Basin Water Board with an annual report describing the pretreatment program activities over the previous twelve (12)-month period and it shall include:

1. A summary of actions taken by the Discharger that ensures industrial-user compliance;
2. An updated list of industrial users (by SIC categories) which were issued permits, and/or enforcement orders; and
3. The name and address of each user that received a revised discharge limit.

In the event that an approved pretreatment program is required, the Discharger shall submit a pretreatment program submittal to obtain pretreatment approval.

## X. REPORTING REQUIREMENTS

### A. General Monitoring and Reporting Requirements

The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.

1. The Discharger shall report the results of chronic toxicity testing, TRE, as required in Section V, "Effluent Toxicity Testing."
2. The results of any analysis taken more frequently than required using analytical methods and/or monitoring procedures, and performed at the locations specified in this MRP shall be reported to the Colorado River Basin Water Board.

3. The Discharger shall ensure laboratory analytical results are consistent with the requirements contained in 40 C.F.R. part 136 with regard to significant figures. 40 C.F.R. part 136 specifies for some analytical methods, the number of significant figures to which measurements are made.

**B. Electronic Self-Monitoring Reports (eSMRs)**

1. The Discharger shall submit electronic Self-Monitoring Reports (eSMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (<http://www.waterboards.ca.gov/ciwqs/index.html>). The CIWQS website will provide additional information for eSMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall maintain sufficient staffing and resources to ensure it submits eSMRs for the duration of the term of this permit including any administrative extensions. This includes provision of training and supervision of individuals (e.g., Discharger personnel or consultant) on how to prepare and submit eSMRs.
3. The Discharger shall report in the eSMR the results for all monitoring specified in this MRP under Sections III through IX. The Discharger shall submit monthly, quarterly, and annual eSMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. eSMRs are to include all new monitoring results obtained since the last eSMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the eSMR.
4. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

**Table E-8. Monitoring Periods and Reporting Schedule**

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	May 1, 2019	All	Submit with monthly eSMR
Daily 1x/Day	May 1, 2019	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly eSMR
Weekly 1x/Week	May 1, 2019	Sunday through Saturday	Submit with monthly eSMR
5x/Month	May 1, 2019	Sunday through Saturday	Submit with monthly eSMR
Monthly 1x/Month	May 1, 2019	1 <sup>st</sup> day of calendar month through last day of calendar month	First day of second month from end of monitoring period
Quarterly 1x/Quarter 4x/Year	May 1, 2019	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
Semiannually 2x/Year	May 1, 2019	January 1 through June 30 July 1 through December 31	Feb 1 July 1
Annually 1x/Year	May 1, 2019	January 1 through December 31	March 1

- 5. Reporting Protocols.** The Discharger shall follow the procedure in 40 C.F.R. part 136 when reporting the results of analytical determinations of chemical constituents in a sample. Further, the Discharger shall use the following reporting protocol:
- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample). For reporting concentration and calculated values in the PET tool follow these instructions:
    - i. Reporting Concentration - Under the "Qualifier" column select "=" and under the "Result" column report the result (concentration).
    - ii. Reporting Calculated Values - Under the "Qualifier" column select "=" and under the "Result" column report the result (calculated value).
  - b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported under the "Qualifier" column as "DNQ" (Detected, but Not Quantified). For the purposes of data collection, the laboratory shall write the estimated chemical concentration under the "Result" column next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy ( $\pm$  a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory. For reporting concentration and calculated values in the PET tool follow these instructions:
    - i. Reporting Concentration – Under the "Qualifier" column select "DNQ," under the "Result" column report the estimated chemical concentration. In addition, the MDL shall be reported under the "MDL" column and the ML shall be reported under the "ML" column.
    - ii. Reporting Calculated Values – Under the "Qualifier" column select "<," under the "Result" column report the calculated value or in the case of mass loading report the average monthly effluent limitation for mass loading.
  - c. Sample results less than the laboratory's MDL shall be reported as "ND" (Not Detected). For reporting concentration and calculated values in the PET tool follow these instructions:
    - i. Reporting Concentration – Under the "Qualifier" column select "ND" and report the MDL under the "MDL" column.
    - ii. Reporting Calculated Values - Under the "Qualifier" column select "<," under the "Result" column report the calculated value (Flow, MGD x 8.34 x MDL (use correct units)) or in the case of mass loading report the average monthly effluent limitation for mass loading.
  - d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 6. Multiple Sample Data.** If the Permit contains an AMEL, AWEL and MDEL for pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
  - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
7. **Formatting of eSMRs.** The Discharger shall submit eSMRs in accordance with the following requirements:
- a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
  - b. The Discharger shall attach a cover letter to the eSMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation. In addition, the Discharger shall add these violations into CIWQS.
  - c. The Discharger shall upload the Whole Effluent Toxicity Test result page or entire report for the reporting period under the attachment tab for the reporting period.
  - d. The Discharger shall upload the laboratory reports for the analysis of the priority pollutant for the reporting period under the attachment tab for the reporting period. The Discharger shall evaluate the results with the criteria and notify the Colorado River Basin Regional Board of any exceedance of the criteria.

**C. Discharge Monitoring Reports (DMRs)**

1. DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with eSMRs using the Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to eSMR submittal. Information about electronic DMR submittal is available at the DMR website at: [http://www.waterboards.ca.gov/water\\_issues/programs/discharge\\_monitoring](http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring).

**D. Other Reports**

1. **Special Studies.** The Discharger shall report the results of any special studies required by Special Provisions – VI.C.2 of this Order. The Discharger shall report the progress in satisfaction of compliance schedule dates specified in Special Provisions – Section VI.C.7 of this Order.
2. The Discharger shall submit reports with the eSMR scheduled to be submitted on or immediately following the report due date.
3. **Biosolids Report.** The Discharger shall submit the biosolids report specified in Attachment H, Subdivision N.
4. **Operations and Maintenance Report.** The Discharger shall report the following as shown in Table E-9:



**Table E-9. Operations and Maintenance Report**

<b>Activity</b>	<b>Reporting Frequency</b>
To inspect and document the operation and maintenance of the UV disinfection system, including but not limited to, inspection, cleaning, and bulb replacement. The Discharger shall provide a certification statement in the annual report that inspections and documentation of inspections and operation/maintenance problems have been completed.	1x/ Year
To inspect and document any operation/maintenance problems by inspecting each unit process. The Discharger shall provide a certification statement in the annual report that inspections and documentation of inspections and operations/maintenance problems have been completed.	1x/Year
Calibration of flow meters and mechanical equipment shall be performed in a timely manner and documented. The Discharger shall provide a certification statement in the annual report that the calibration of flow meters and mechanical equipment has been conducted and documentation of such calibrations is maintained.	1x/Year
The Discharger shall maintain documentation of all logbooks (operation and maintenance), chain of custody sheets, laboratory and sampling activities as stated in Standard Provisions Sections IV and V (Attachment D). The Discharger shall provide a certification statement in the annual report that maintenance of logbooks, chain of custody sheets, and laboratory and sampling activities as required is being implemented.	1x/Year
The Discharger shall conduct an annual review and evaluation of priority pollutant sampling results collected each year to evaluate the impact on surface water quality, and provide this evaluation in the annual report.	1x/Year

## ATTACHMENT F – FACT SHEET

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## ATTACHMENT F – FACT SHEET

As described in Section II.D of this Order, the Colorado River Basin Water Quality Control Board (Colorado River Basin Water Board) incorporates this Fact Sheet as findings of the Colorado River Basin Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

### I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

**Table F-1. Facility Information**

<b>WDID</b>	7A 13 1337 001
<b>Discharger</b>	California Department of Corrections and Rehabilitation
<b>Name of Facility</b>	Centinela State Prison Wastewater Treatment Plant (WWTP)
<b>Facility Address</b>	2302 Brown Road
	Imperial, CA 92251
	Imperial County
<b>Legally Responsible Official</b>	Raymond Maddon, Warden, (760) 337-7900 ext. 5202, <a href="mailto:Raymond.maddon@cdcr.ca.gov">Raymond.maddon@cdcr.ca.gov</a>
<b>Facility Contact, Title and Phone</b>	Chris Machado, Correctional Plant Manager I, (760) 337-7649, <a href="mailto:chris.machado@cdcr.ca.gov">chris.machado@cdcr.ca.gov</a>
<b>Authorized Person to Sign and Submit Reports</b>	Robert Beatty, Chief Engineer I, (760) 337-7900 ext. 7421, <a href="mailto:robert.beatty@cdcr.ca.gov">robert.beatty@cdcr.ca.gov</a>
<b>Mailing Address</b>	P.O. Box 731 Imperial, CA 92251
<b>Billing Address</b>	SAME
<b>Type of Facility</b>	Publicly Owned Treatment Works (POTW)
<b>Major or Minor Facility</b>	Minor
<b>Threat to Water Quality</b>	2
<b>Complexity</b>	B
<b>Pretreatment Program</b>	N
<b>Recycling Requirements</b>	None
<b>Facility Permitted Flow</b>	0.96 million gallons per day (MGD)
<b>Facility Design Flow</b>	0.96 MGD
<b>Watershed</b>	Brawley, H.A.
<b>Receiving Water</b>	Dixie Drain 1-C (Imperial Valley Drains)
<b>Receiving Water Type</b>	Agricultural drain immediately tributary to a stream/river

- A.** The California Department of Corrections and Rehabilitation (Discharger) is the owner and operator of the Centinela State Prison WWTP (Facility), a POTW.

For the purposes of this Order, references to the “Discharger” or “Permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- B.** The Facility discharges wastewater to the Dixie Drain 1-C, a water of the United States and which is tributary to the New River. The Discharger was previously regulated by Order R7-2014-0003 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA7000001, which was adopted on May 8, 2014 and expires on May 31, 2019. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- C.** The Discharger filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on October 15, 2018. The application was deemed complete on January 25, 2019. A site visit was conducted on December 10, 2018 to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

## **II. FACILITY DESCRIPTION**

The Discharger owns and operates a wastewater collection, treatment, and disposal system (the Facility) and provides service to an inmate population of approximately 4,600 located at the Centinela State Prison in Imperial County in the NE ½ of Section 36, T15S, R11E, SBB&M. The permitted maximum daily flow limitation is equal to the design capacity of the wastewater treatment plant, which is 0.96 MGD. The discharge consists of disinfected secondary treated wastewater.

### **A. Description of Wastewater Treatment System**

The current treatment system consists of an aerated lagoon system with four cells. The Facility was last upgraded to increase the overall treatment capacity and to improve treatment efficiency in 2009. The headworks is comprised of coarse mechanical screening with a manual bar rack in the bypass channel. Two submersible pumps equipped with variable frequency drives pump influent to the treatment system. Influent flow is metered and passed through mechanical fine screening prior to treatment through the four-cell aerated lagoon treatment system. High-efficiency aerators provide aeration to the wastewater in the cells. A transfer piping system between the cells reduces the potential for short-circuiting in the treatment process (i.e., direct pass-through from one cell to another without receiving adequate/full designed treatment in the aeration lagoons). The auxiliary levee around the perimeter of the four treatment ponds provides 24 inches of freeboard above the water surface. The Discharger may add sulfuric acid to the chlorine chamber during summer months to control effluent pH concentrations from exceeding the instantaneous maximum effluent limitation (9 s.u.).

Effluent treated through the four-cell aerated treatment system undergoes disinfection by chlorination, followed by dechlorination. The disinfection system uses liquid sodium hypochlorite for disinfection followed by liquid sodium bisulfite for dechlorination prior to discharge through Discharge Point 001 to the Dixie Drain 1-C, a tributary to the New River.

Accumulated inert solids and biosolids will be dredged from each of the lagoon cell bottoms annually and solar dried on two drying beds prior to being hauled off-site for disposal to either a landfill or by a contractor for composting. Solids that have accumulated on the bottom of the chlorination chamber are removed monthly and dried on the sludge drying beds. Solids are removed from the site annually.

### **B. Discharge Points and Receiving Waters**

Final effluent is discharged through Discharge Point 001 at Latitude 32° 49' 12" North and Longitude 115° 46' 12" West, to Dixie Drain 1-C, a water of the United States and a tributary to the New River.

### C. Summary of Historic Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in the existing Order R7-2014-0003 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order are as follows in Table F-2:

**Table F-2. Historic Effluent Limitations and Monitoring Data**

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2014 – December 2017)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Flow	MGD	0.96	---	---	0.612 <sup>1</sup>	---	1.439
pH	Standard Units	6.0	---	9.0	7.2 – 9.2 <sup>2</sup>		
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	mg/L	45	65	---	24.8	41.4	---
	lbs/day	360	520	---	---	182	182
Removal Efficiency for BOD <sub>5</sub>	%	65	---	---	75.9 <sup>3</sup>		
Total Suspended Solids (TSS)	mg/L	77	115	---	75.1	---	98
	lbs/day	616	921	---	287	---	556
Oil and Grease	mg/L	---	---	25	---	---	297 <sup>4</sup>
	lbs/day	---	---	200	---	---	---
Chlorine, Total Residual	mg/L	0.01	---	0.02	<0.01	---	0.02
	lbs/day	0.08	---	---	0.05	---	---
Escherichia coli ( <i>E. coli</i> )	MPN/100 mL	126 <sup>5</sup>	---	400 <sup>6</sup>	48.5	---	2,419 <sup>7</sup>
Enterococci	MPN/100 mL	33 <sup>5</sup>	---	100 <sup>6</sup>	16.3	---	272
Fecal Coliform	MPN/100 mL	200 <sup>5</sup>	---	400 <sup>8</sup>	128	---	1,600 <sup>7</sup>
Chronic Toxicity – Survival & Reproduction ( <i>Ceriodaphnia dubia</i> )	TU <sub>c</sub>	9			4		
Chronic Toxicity – Growth ( <i>Selenastrum capricornutum</i> )	TU <sub>c</sub>	9			1		
Chronic Toxicity – Survival and Growth ( <i>Pimephales promelas</i> )	TU <sub>c</sub>	9			1		

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2014 – December 2017)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge

- <sup>1</sup> This value represents the highest average monthly flow value (September 2015).
- <sup>2</sup> These values represent the minimum and maximum reported pH values, respectively.
- <sup>3</sup> This value represents the minimum reported % removal value (June 28, 2017).
- <sup>4</sup> This value (November 2016) represents the only detected reported value and represents an exceedance of the effluent limitation.
- <sup>5</sup> This effluent limitation is expressed as a geometric (or log) mean, based on a minimum of not less than five samples for any 30-day period.
- <sup>6</sup> This effluent limitation is expressed as a maximum single sample value.
- <sup>7</sup> This value (September 12, 2016) represents an exceedance of the permit limitation. This is the only value reported greater than the effluent limitation during the permit term.
- <sup>8</sup> No more than ten percent of the total fecal coliform samples collected during any 30-day period shall exceed a MPN of 400 per 100 milliliters.
- <sup>9</sup> The previous permit contained a narrative toxicity effluent limitation stating, "There shall be no toxicity in the treatment plant effluent nor shall the treatment plant effluent cause any toxicity in the receiving water, as defined in section V of the MRP. All waters shall be maintained free of toxic substances in concentrations which are toxic to, or which produce detrimental physiological responses in human, plant, animal, or indigenous aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, or toxicity tests of appropriate duration or other appropriate methods specified by the Colorado River Basin Water Board."

The ROWD described the existing discharge as follows:

Annual Average Effluent Flow – 0.38 MGD

Maximum Daily Effluent Flow – 0.65 MGD

Average Daily Effluent Flow – 0.38 MGD

Table 3 presents the effluent characteristics reported in the ROWD and EPA Form 2A.

**Table F-3. Effluent Characteristics**

Parameter	Units	Maximum Daily	Average Daily
pH (Minimum)	s.u.	7.80	--
pH (Maximum)	s.u.	9.20	--
Temperature	°F	91.00	88.60
BOD <sub>5</sub> (EFF-001)	mg/L	41.40	18.16
TSS (EFF-001)	mg/L	75.50	48.10
Fecal Coliform	MPN/100 ml	80.00	14.70
Ammonia as Nitrogen	mg/L	3.61	1.62
Dissolved Oxygen	mg/L	6.10	5.00
Total Kjeldahl Nitrogen	mg/L	5.04	3.30
Nitrate+Nitrite (as Nitrogen)	mg/L	22.59	14.60
Oil and Grease	mg/L	297.00	101.00
Phosphorus	mg/L	2.40	1.80
Total Dissolved Solids	mg/L	1058.00	989.00

#### D. Past Compliance Summary

The available effluent monitoring data indicate that the Discharger has had several effluent limitation violations for indicator bacteria and BOD<sub>5</sub>. Available effluent monitoring data, submitted in the Discharger's Self-Monitoring Reports, that was reported above effluent limitations is summarized below:

**Table F-4. Violations Report Summary - pH, and Oil and Grease**

Date of Exceedance	Limit Basis	Parameter	Permit Limitations	Reported Value	Units
2/24/2017	Instantaneous Maximum	pH	9.0	9.2	s.u.
11/2/2016	Daily Maximum	Oil and Grease	25	297	mg/L

**Table F-5. Violations Report Summary - Bacterial Indicators**

Date of Exceedance	Permit Limitation	Reported Value	Units
<b>Enterococci</b>			
12/14/2016	100 (Maximum)	272	MPN/100 ml
12/7/2016	"	189	MPN/100 ml
11/30/2016	"	140	MPN/100 ml
9/12/2016	"	103	MPN/100 ml
<b>Fecal Coliform</b>			
12/31/2016	10% of the total samples during any 30-day period not to exceed an MPN of 400 per 100 milliliters	1600	%
11/30/2016	"	1600	%
9/30/2016	"	1600	%

#### E. Planned Changes

There are no planned changes at the Facility during the permit term.

### III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

#### A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

#### B. California Environmental Quality Act (CEQA)

This Order serves as both an NPDES permit for discharges subject to the Clean Water Act and as WDRs for discharges subject to the California Water Code. Pursuant to Water Code section 13389, this action to adopt an NPDES permit is exempt from CEQA (Public Resources Code section 21000 et seq.). Under California Code of Regulations, title 14, section 15301, the Colorado River Basin Water Board's action in approving those parts of the Order that implement state law is also exempt from CEQA, because the Facility is an existing facility with negligible or no expansion of existing use.

#### C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Water Quality Control Plan for the Colorado River Basin Region (Basin Plan), which was adopted on November 17, 1993 and amended on March 7, 2017, designates beneficial uses, establishes water quality objectives, and contains



implementation programs and policies to achieve those objectives for all waters addressed through the plan. The requirements in this Order implement the Basin Plan and protect existing and potential beneficial uses of the receiving water, which are described in Table F-6:

**Table F-6. Basin Plan Beneficial Uses**

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Dixie Drain 1-C (Imperial Valley Drains)	Existing: Fresh Water Replenishment (FRSH); Water Contact Recreation (REC-I) <sup>1, 2</sup> ; Non-Contact Water Recreation (REC-II); Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); and Support of Rare, Threatened, or Endangered Species (RARE). <sup>3</sup>

<sup>1</sup> Unauthorized use.

<sup>2</sup> The only REC-1 use that is known to occur is from infrequent fishing activity.

<sup>3</sup> Rare, endangered, or threatened wildlife exists in or utilizes some of these waterway(s). If the RARE beneficial use may be affected by a water quality control decision, responsibility for substantiation of the existence of rare, endangered, or threatened species on a case-by-case basis is upon the California Department of Fish and Wildlife on its own initiative and/or at the request of the Colorado River Basin Water Board; and such substantiation must be provided within a reasonable time frame, as approved by the Colorado River Basin Water Board.

2. **Thermal Plan.** The State Water Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* (Thermal Plan) on January 7, 1971 and amended this plan on September 18, 1975. The plan contains temperature objectives for surface waters. The Thermal Plan does not apply these objectives to the Dixie Drain 1-C (Imperial Valley Drains), an agricultural drain, because agricultural drainage channels do not have a “natural” receiving water temperature.
3. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously-adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.
4. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Colorado River Basin Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
5. **Emergency Planning and Community Right to Know Act.** Water Code section 13263.6(a) requires that the Colorado River Basin Water Board prescribe effluent limitations as part of the WDRs of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. § 11023) indicate as discharged into the POTW, for which the State Water Board or the Colorado River Basin Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause,

have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective.

6. **Stormwater Requirements.** USEPA promulgated federal regulations for stormwater on November 16, 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Stormwater Program regulates stormwater discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the stormwater program and are obligated to comply with the federal regulations.
7. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the federal Endangered Species Act (16 U.S.C. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
8. **Sewage Sludge and Biosolids.** This Order does not authorize any act that results in violation of requirements administered by USEPA to implement 40 C.F.R. part 503, Standards for the Use or Disposal of Sewage Sludge. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Discharger is responsible for meeting all applicable requirements of 40 C.F.R. part 503 that are under USEPA's enforcement authority.
9. **Antidegradation Policy.** 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*. Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality of high quality waters be maintained unless degradation is justified based on specific findings. The Colorado River Basin Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.
10. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the Clean Water Act and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

#### **D. Impaired Water Bodies on Clean Water Act 303(d) List**

Section 303(d) of the federal Clean Water Act requires states to identify waterbodies that do not meet water quality standards and are not supporting their beneficial uses after implementation of technology-based effluent limitations on point sources. Each state must submit an updated list, the 303(d) List of Impaired Waterbodies (303(d) List) every 2 years. In addition to identifying the waterbodies that are not supporting beneficial uses, the 303(d) List also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. On July 15, 2015, USEPA gave final approval to California's 2012 303(d) List.

**The Dixie Drain 1-C.** The 303(d) List classifies the Imperial Valley Drains, which includes the Dixie Drain 1-C, as impaired by chlordane, Dichlorodiphenyltrichloroethane (DDT), dieldrin, Polychlorinated biphenyls (PCBs), sediment, selenium, and toxaphene. However, the Dixie

Drain 1-C is specifically only listed as being impaired by the following constituents: sediment and selenium. The Colorado River Basin Water Board has not developed TMDLs addressing these impairments to date.

**The New River.** The Dixie Drain 1-C is tributary to the New River. The New River is listed on the 303(d) List as impaired for bifenthrin, chlordane, chloride, chlorpyrifos, cypermethrin, DDT, diazinon, dieldrin, hexachlorobenzene, indicator bacteria, mercury, naphthalene, nitrogen ammonia, nutrients, organic enrichment/low dissolved oxygen, PCBs, sediment, selenium, toxaphene, toxicity, and trash.

On November 16, 2012, USEPA approved a TMDL for Dissolved Oxygen (DO) for the New River. This TMDL only established waste load allocations (WLAs) for a particular segment of the New River – namely, the 0.8 mile of impaired reach of the New River immediately downstream from the International Boundary (IB) with Mexico. Because the Facility is located more than 10 miles downstream from the IB, the DO TMDL does not include any requirements applicable to the Discharger.

USEPA also approved TMDLs for indicator bacteria (August 14, 2002) and sediment for the New River (March 31, 2003). These TMDLs establish waste load allocations (WLAs) for fecal coliform, *E. coli*, enterococci, and sediment. The established effluent limitations for fecal coliform, *E. coli*, enterococci, and TSS in this Order comply with the WLAs established in the New River TMDLs.

USEPA also approved a trash TMDL for the New River. The TMDL establishes a prohibition on the discharge of any trash to the New River from point sources. In compliance with the trash TMDL, this Order prohibits discharges of trash from the Facility to the New River.

**The Salton Sea.** The New River is tributary to the Salton Sea. The 303(d) List classifies the Salton Sea as impaired by arsenic, chloride, chlorpyrifos, DDT, enterococcus, low dissolved oxygen, nitrogen-ammonia (total ammonia), nutrients, salinity, and toxicity. The Colorado River Basin Water Board has not developed TMDLs addressing these impairments to date. Tributaries to the Salton Sea, including the New River and the receiving water, may be affected by the development of TMDLs for the Salton Sea.

#### **E. Other Plans, Policies, and Regulations**

1. **Stormwater Management.** For the control of stormwater discharged from the site of the wastewater treatment facilities, dischargers typically must seek authorization to discharge under and meet the requirements of State Water Board Order 97-03-DWQ, NPDES General Permit No. CAS000001, *Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities*. At this time, the Facility is not enrolled in the General Permit because the Facility design flow is less than 1 MGD and there is no approved pretreatment program.
2. **Statewide General Waste Discharge Requirements for Sanitary Sewer Systems (State Water Board Order No. 2006-0003-DWQ).** The General Permit, adopted on May 2, 2006, is applicable to all “federal and state agencies, municipalities, counties, districts, and other public entities that own or operate sanitary sewer systems greater than one mile in length that collect and/or convey untreated or partially treated wastewater to a publicly owned treatment facility in the State of California.” The purpose of the General Permit is to promote the proper and efficient management, operation, and maintenance of sanitary sewer systems and to minimize the occurrences and impacts of sanitary sewer overflows. The Discharger has obtained coverage under the General Permit, and the Discharger’s WDID number is 7SSO11187.

#### **IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS**

The Clean Water Act requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The

control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations; 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards, and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) may be established: (1) using USEPA criteria guidance under Clean Water Act section 304(a), supplemented where necessary by other relevant information; (2) on an indicator parameter for the pollutant of concern; or (3) using a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in 40 C.F.R. section 122.44(d)(1)(vi).

Effluent and receiving water limitations in this Order are based on the federal Clean Water Act, the Basin Plan, the State Water Board's plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. While developing effluent limitations and receiving water limitations, monitoring requirements, and special conditions for the draft permit, the following information sources were used:

1. NPDES Application Forms: California Form 200, USEPA Forms 2A and 2S dated October 15, 2018;
2. Title 40 of the Code of Federal Regulations;
3. The Basin Plan, as adopted on November 17, 1993 and amended on March 7, 2017; and
4. Colorado River Basin Water Board files related to the California Department of Corrections and Rehabilitation, Centinela State Prison WWTP NPDES permit CA7000001.

#### **A. Discharge Prohibitions**

1. **Discharge Prohibition III.A.** (The discharge of waste to land is prohibited unless authorized in a separate waste discharge permit.)

This prohibition has been retained from Order No. R7-2014-0003. The limitations and conditions established by the Order are based on specific information provided by the Discharger (including through the ROWD) and gained by the Colorado River Basin Water Board through site visits, monitoring reports, and by other means. Discharges of a character not contemplated by this Order, such as discharges to land, are therefore inconsistent with Clean Water Act section 402's prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also based on the Basin Plan to protect the beneficial uses of the receiving water from unpermitted discharges, and it is in keeping with the intent and requirements of Water Code sections 13260 through 13264.

2. **Discharge Prohibition III.B.** (The discharge of treated wastewater from the Facility at a location or in a manner different from that described in this Order is prohibited.)

This prohibition has been retained from Order No. R7-2014-0003. The limitations and conditions established by the Order are based on specific information provided by the Discharger (including through the ROWD) and gained by the Colorado River Basin Water Board through site visits, monitoring reports, and by other means. Discharges to surface waters at locations not contemplated by this Order, or discharges of a character not contemplated by this Order, are therefore inconsistent with Clean Water Act section 402's prohibition against discharges of pollutants except in compliance with the Act's permit requirements, effluent limitations, and other enumerated provisions. This prohibition is also based on the Basin Plan to protect the beneficial uses of the receiving water from

unpermitted discharges, and it is in keeping with the intent and requirements of Water Code sections 13260 through 13264.

3. **Discharge Prohibition III.C.** (The discharge of trash from the Facility to the Dixie Drain 1-C is prohibited.)

This prohibition has been retained from Order No. R7-2014-0003. The Dixie Drain 1-C is tributary the New River. USEPA approved a trash TMDL for the New River that establishes a complete prohibition on the discharge of trash to the New River from point sources. This prohibition implements the trash TMDL. Additionally, the Basin Plan prohibits conditions that create a nuisance.

4. **Discharge Prohibition III.D.** (The bypass or overflow of untreated or partially-treated wastewater or wastes to the Dixie Drain 1-C is prohibited, except as allowed under Sections I.G (Bypass) and I.H (Upset) of Attachment D, Standard Provisions.)

This prohibition has been retained from Order No. R7-2014-0003, with minor modifications. The discharge of untreated or partially-treated wastewater from the Discharger's collection, treatment, or disposal facility represents an unauthorized bypass pursuant to 40 C.F.R. section 122.41(m) or an unauthorized discharge which poses a threat to human health and/or aquatic life, and therefore is explicitly prohibited by this Order.

5. **Discharge Prohibition III.E.** (The Discharge of waste in excess of the design treatment or disposal capacity of the system, 0.96 million gallons per day (MGD), is prohibited.)

This prohibition has been retained from Order No. R7-2014-0003 and is based on the design capacity of the Facility. Exceedance of this capacity may result in effluent violations and/or the need to bypass untreated effluent blended with treated effluent, which is prohibited by this Order.

6. **Discharge Prohibition III.F.** (The discharge of waste that causes pollution or nuisance as defined in Water Code section 13050, subdivisions (l) and (m), respectively, is prohibited.)

This prohibition has been retained from Order No. R7-2014-0003 and is based on section 13050 of the Water Code. The Basin Plan also prohibits conditions that create a nuisance.

## **B. Technology-Based Effluent Limitations**

### **1. Scope and Authority**

Section 301(b) of the Clean Water Act and implementing USEPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, as well as any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on secondary treatment standards or equivalent to secondary treatment standards in 40 C.F.R. part 133.

#### **a. Secondary Treatment Standards**

In 40 C.F.R. part 133, USEPA published secondary treatment standards based on an evaluation of performance data for POTWs practicing a combination of physical and biological treatment to remove biodegradable organics and suspended solids. The regulation applies to all POTWs and identifies the technology-based performance standards achievable based on secondary treatment for BOD<sub>5</sub>, TSS, and pH. Specifically, section 133.102 allows concentrations of up to 30 mg/L (monthly average) and up to 45 mg/L (weekly average) for BOD<sub>5</sub> and TSS. (40 C.F.R. § 133.102, (a)-(b).) The effluent values for pH must be maintained within the limits of 6.0 to 9.0. (40 C.F.R. § 133.102(c).)

**b. Equivalent to Secondary Treatment Standards**

Some biological treatment technologies, such as trickling filters or waste stabilization ponds, are capable of achieving significant reductions in BOD<sub>5</sub> and TSS but might not consistently achieve the secondary treatment standards for these parameters. Congress recognized that unless alternate limitations were set for facilities with trickling filters or waste stabilization ponds, which often are in small communities, such facilities could be required to construct costly new treatment systems to meet the secondary treatment standards even though their existing treatment technologies could achieve significant biological treatment. Congress included provisions in the 1981 amendments to the Clean Water Act Construction Grants program (Public Law 97-117, Section 23) that required EPA to make allowances for alternative biological treatment technologies, such as a trickling filters or waste stabilization ponds. In response to that requirement, in 1984, EPA promulgated regulations at 40 C.F.R. section 133.105 that include alternative standards that apply to facilities using “equivalent to secondary treatment.”

In order to be eligible for equivalent-to-secondary limitations, a POTW must meet all of the following criteria (40 C.F.R. § 133.101(g)):

- i. The principal treatment process must be either a trickling filter or waste stabilization pond.
- ii. The effluent quality consistently achieved, despite proper operations and maintenance, is in excess of the secondary treatment effluent limits for BOD<sub>5</sub> and/or TSS.
- iii. The treatment works provide significant biological treatment (defined as consistently achieving a 30–day average of at least 65 percent removal of BOD<sub>5</sub>) of municipal waste water.

The “equivalent to secondary treatment” standards allow concentrations of *up to* 45 mg/L (monthly average) and *up to* 65 mg/L (weekly average) for BOD<sub>5</sub> and TSS. (40 C.F.R. § 133.105, (a)-(b).) There is no change allowed to secondary treatment standards in 40 C.F.R. section 133.102(c) for pH. (40 C.F.R. § 133.105(c).)

**c. Adjusted TSS Requirements for Waste Stabilization Ponds**

Pursuant to 40 C.F.R. section 133.103(c), states can adjust the maximum allowable TSS concentration for waste stabilization ponds upward from those specified in the equivalent to secondary treatment standards to conform to TSS concentrations achievable with waste stabilization ponds. That provision defines “SS concentrations achievable with waste stabilization ponds” as the effluent concentration achieved 90 percent of the time within a state or appropriate contiguous geographical area by waste stabilization ponds that are achieving the levels of effluent quality for BOD<sub>5</sub> specified in section 133.105(a)(1) (45 milligrams per liter [mg/L] as a 30-day average). To qualify for an adjustment up to as high as the maximum concentration allowed, a facility must use a waste stabilization pond as its principal process for secondary treatment and its operations and maintenance data must indicate that it cannot achieve the equivalent to secondary standards. In 1984, USEPA published approved, alternate TSS requirements in 49 Federal Register (FR) 37005, which sets the maximum TSS value for California for lagoon effluent at 95 mg/L. This value corresponds to a 30-day consecutive average or an average over duration of less than 30 days. In no case, however, can effluent limitations be set for an existing facility that are less stringent than the 30–day average and 7–day average BOD<sub>5</sub> and TSS effluent values that could be achievable through proper operation and maintenance of the POTW, based on an analysis of the past performance of the POTW. (40 C.F.R. § 133.105(f)(1).)

## 2. Applicable Technology-Based Effluent Limitations

- a. This Facility, through use of the current treatment system (i.e., aeration lagoons), meets the technology-based regulations for the minimum level of effluent quality attainable by equivalent to secondary treatment standards (with the upward adjustment for TSS from 40 C.F.R. section 133.103(c)) in terms of biochemical oxygen demand (BOD<sub>5</sub>), TSS, and pH for the existing treatment system of aeration lagoons. This Order revises effluent limitations from the prior permit based on an evaluation of the performance data for the period from June 2014 through December 2017. Federal regulations at 40 C.F.R. section 133.101(f) define the effluent concentrations consistently achievable through proper operation and maintenance as: (1) the 95<sup>th</sup> percentile value of the 30-day average effluent quality achieved in a period of at least two years, excluding values attributable to upsets, bypasses, operational errors, or other unusual conditions; and (2) a 7-day average value equal to 1.5 times the value derived for the 95<sup>th</sup> percentile value of the 30-day average. According to analysis of TSS data collected for the period from June 2014 through December 2017, the 95<sup>th</sup> percentile value of the 30-day average concentrations is 59 mg/L. The 7-day average is therefore 89 mg/L (1.5 times 59 mg/L).<sup>1</sup> Further, mass-based effluent limitations are based on a design flow rate of 0.96 MGD.
- b. These effluent limitations are summarized in Table F-7.

**Table F-7. Summary of Technology-based Effluent Limitations**

Parameter	Units	Effluent Limitation				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	MGD	0.96	---	---	---	---
Biochemical Oxygen Demand (BOD <sub>5</sub> ) (5 day @ 20 Deg. C)	mg/L	45	65	---	---	---
	lbs/day <sup>1</sup>	360	520	---	---	---
BOD <sub>5</sub> % Removal	%	65	---	---	---	---
Suspended Solids, Total (TSS)	mg/L	59	89	---	---	---
	lbs/day <sup>1</sup>	472	713	---	---	---
pH	s.u.	---	---	---	6.0	9.0

<sup>1</sup> Mass-based effluent limitations are based upon a maximum flow of 0.96 MGD.

### c. Basis for Limitations:

**Table F-8. Basis for Limitations**

Parameters	Basis for Limitations
Flow	The design capacity of the treatment plant is 0.96 MGD.
Biochemical Oxygen Demand (BOD) (5 day @ 20 Deg. C)	40 C.F.R. §§ 133.105(b), 133.105(f)(1).
BOD <sub>5</sub> Removal	40 C.F.R. §§ 133.105(a)-(b).
Total Suspended Solids (TSS)	40 C.F.R. §§ 133.103(c), 133.105(f)(1).
pH	40 C.F.R. § 133.102(c).

## C. Water Quality-Based Effluent Limitations (WQBELs)

<sup>1</sup> These limits are also consistent with the New River Sedimentation/Siltation TMDL approved by U.S. EPA on March 31, 2003.

NPDES regulations at 40 C.F.R. 122.44(d) require effluent limitations to control all pollutants which are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard.

The SIP, a statewide policy that became effective on May 22, 2000, establishes procedures to implement water quality criteria from the NTR and CTR and for priority, toxic pollutant objectives established in the Basin Plan. The implementation procedures of the SIP include methods to determine reasonable potential (for pollutants to cause or contribute to excursions above state water quality standards) and to establish numeric effluent limitations, if necessary, for those pollutants that show reasonable potential.

Section 1.3 of the SIP requires the Colorado River Basin Water Board to use all available, valid, relevant, and representative receiving water and effluent data and information to conduct a reasonable potential analysis. The reasonable potential analysis was performed based on available priority pollutant monitoring data collected by the Discharger from analyses of annual samples collected during the period from January 2015 through December 2017.

Some freshwater water quality criteria for metals are hardness dependent; i.e., as hardness decreases, the toxicity of certain metals increases and the applicable water quality criteria become correspondingly more stringent. The hardness value used to conduct the reasonable potential analysis (RPA) was 264 mg/L as CaCO<sub>3</sub> and the pH value was 7.5.

To conduct the reasonable potential analysis, the Colorado River Basin Water Board identified the maximum observed effluent (MEC) and background (B) concentrations for each priority pollutant from receiving water and effluent data provided by the Discharger and compared this data to the most stringent applicable water quality criterion (C) for each pollutant from the NTR, CTR, and Basin Plan. Section 1.3 of the SIP establishes three triggers for a finding of reasonable potential:

- a. Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limit is needed.
- b. Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent, a limit is needed.
- c. Trigger 3 – If other related information, such as a 303(d) listing for a pollutant, discharge type, compliance history, etc., indicates that a WQBEL is required.

Based on analysis of the effluent data, the Colorado River Basin Water Board, using the methods presented in the SIP, finds that the discharge does not have reasonable potential to cause or contribute to an excursion above applicable water quality criteria for priority pollutants, except for copper and alpha-BHC.

Data evaluated in the RPA for priority pollutants reported in detectable concentrations in the effluent are summarized in Table F-10.

**Table F-10. Summary of Reasonable Potential Analysis**

CTR No.	Priority Pollutant	Applicable Water Quality Criteria (C)	Max. Effluent Concentration (MEC)	Max. Detected Receiving Water Concentration (B) <sup>1</sup>	RPA Result – Effluent Limit Required?	Reason
		µg/L	µg/L	µg/L		
1	Antimony	4,300	0.94	---	No	MEC < C
2	Arsenic	150	3.3	---	No	MEC < C
5a	Chromium III	458.38	0.72	---	No	MEC < C



CTR No.	Priority Pollutant	Applicable Water Quality Criteria (C)	Max. Effluent Concentration (MEC)	Max. Detected Receiving Water Concentration (B) <sup>1</sup>	RPA Result – Effluent Limit Required?	Reason
		µg/L	µg/L	µg/L		
6	Copper	21.38	28.5	---	Yes	MEC > C
7	Lead	10.95	0.53	---	No	MEC < C
9	Nickel	118.59	5.1	---	No	MEC < C
10	Selenium	5	2.3	---	No	MEC < C
13	Zinc	272.74	30.8	---	No	MEC < C
14	Cyanide	5.2	2.5	---	No	MEC < C
20	Bromoform	360	8.9	---	No	MEC < C
23	Chlorodibromomethane	34	1.3	---	No	MEC < C
26	Chloroform	---	27.7	---	No	MEC < C
27	Dichlorobromomethane	46	8.6	---	No	No Criteria
39	Toluene	200,000	1.2	---	No	MEC < C
81	Di-n-Butyl Phthalate	12,000	2.2	---	No	MEC < C
103	alpha-BHC	0.013	0.022	---	Yes	MEC > C

“---” Data is not available

<sup>1</sup> There is no receiving water upstream of the discharge point.

#### 4. WQBEL Calculations for Priority Pollutants

- Final WQBELs for priority pollutants are based on monitoring results and following the calculation process outlined in section 1.4 of the SIP. A table providing the calculations for all applicable WQBELs for this Order is provided in Attachment G of this Order.

- WQBELs Calculation Example**

Using copper as an example, the following demonstrates how WQBELs based on an aquatic life criterion were established for Order R7-2019-0003. The process for developing these limits is in accordance with section 1.4 of the SIP. Attachment G summarizes the development and calculation of all WQBELs for this Order using the process described below.

**Step 1:** For each constituent requiring an effluent limit, identify the applicable water quality criteria or objective. For each criterion determine the effluent concentration allowance (ECA) using the following steady state equation:

$$ECA = C + D(C-B) \quad \text{when } C > B, \text{ and}$$

$$ECA = C \quad \text{when } C \leq B,$$

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH and translators. In this Order, a downstream receiving water hardness value of 264 mg/L (as CaCO<sub>3</sub>) was used for development of hardness-dependent criteria, and a pH of 7.5 was used for pH-dependent criteria.

D = dilution credit, and

B = ambient background concentration

For this Order, dilution was not allowed due to the nature of the receiving water and quantity of the effluent; therefore:

$$ECA = C$$

For copper, the applicable water quality criteria are:

$$ECA_{\text{acute}} = 34.94 \mu\text{g/L}$$

$$ECA_{\text{chronic}} = 21.38 \mu\text{g/L}$$

$$ECA_{\text{human health}} = \text{Not Applicable}$$

**Step 2:** For each ECA based on aquatic life criterion/objective, staff determined the long-term average discharge condition (LTA) by multiplying the ECA by a factor (multiplier). The multiplier is a statistically based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP and will not be repeated here.

$$LTA_{\text{acute}} = ECA_{\text{acute}} \times \text{Multiplier}_{\text{acute}}$$

$$LTA_{\text{chronic}} = ECA_{\text{chronic}} \times \text{Multiplier}_{\text{chronic}}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set contains less than 10 samples, or at least 80% of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6.

For copper, the following data was used to develop the acute and chronic LTA using Table 1 of the SIP:

No. of Samples Available	CV	Multiplier <sub>acute</sub>	Multiplier <sub>chronic</sub>
3	0.60	0.32	0.53

$$LTA_{\text{acute}} = 34.94 \mu\text{g/L} \times 0.32 = 11.22 \mu\text{g/L}$$

$$LTA_{\text{chronic}} = 21.38 \mu\text{g/L} \times 0.53 = 11.28 \mu\text{g/L}$$

**Step 3:** Select the most limiting (lowest) of the LTA.

$$LTA = \text{most limiting of } LTA_{\text{acute}} \text{ or } LTA_{\text{chronic}}$$

For copper, the most limiting LTA was the  $LTA_{\text{acute}}$

$$LTA = 11.22 \mu\text{g/L}$$

**Step 4:** Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as Average Monthly Effluent Limitations (AMEL) and Maximum Daily Effluent Limitations (MDEL). The multiplier is a statistically based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the coefficient of variation (CV) of the data set, the number of samples (for AMEL) and whether it is monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP and will not be repeated here.

$$AMEL_{\text{aquatic life}} = LTA \times AMEL_{\text{multiplier}}$$

$$MDEL_{\text{aquatic life}} = LTA \times MDEL_{\text{multiplier}}$$

AMEL multipliers are based on a 95<sup>th</sup> percentile occurrence probability, and the MDEL multipliers are based on the 99<sup>th</sup> percentile occurrence probability. If the number of samples is less than four (4), the default number of samples to be used is four (4).

For copper, the following data was used to develop the AMEL and MDEL for aquatic life using Table 2 of the SIP:

No. of Samples per Month	CV	Multiplier <sub>MDEL</sub>	Multiplier <sub>AMEL</sub>
4	0.60	3.11	1.55

$$AMEL_{\text{aquatic life}} = 11.22 \times 1.55 = 17.4 \mu\text{g/L}$$

$$MDEL_{\text{aquatic life}} = 11.22 \times 3.11 = 34.9 \mu\text{g/L}$$

**Step 5:** For the ECA based on human health, set the AMEL equal to the ECA<sub>human health</sub>

However, there are no human health water quality criteria for copper; therefore, effluent limitations based on human health criteria could not be calculated.

**Step 6:** Select the lower of the AMEL and MDEL based on aquatic life and human health as the water-quality based effluent limit for the Order.

AMEL <sub>aquatic life</sub>	MDEL <sub>aquatic life</sub>	AMEL <sub>human health</sub>	MDEL <sub>human health</sub>
17.4 $\mu\text{g/L}$	34.9 $\mu\text{g/L}$	NA	NA

The lowest (most restrictive) effluent limits for copper are based on aquatic life and were incorporated into this Order.

## 5. WQBELs for Non-Priority Pollutants

- Pursuant to 40 C.F.R. section 122.44(d), the Colorado River Basin Water Board must establish effluent limitations to control non-priority pollutants that have the reasonable potential to cause or contribute to an excursion above any state water quality standard.

### b. Bacterial Indicators

Raw domestic wastewater inherently contains bacteria and human pathogens that threaten human health and aquatic life, and constitutes a threatened pollution and nuisance under Water Code section 13050 if discharged untreated to the receiving water. In light of the operational and discharge characteristics of the Facility, there exists reasonable potential for an exceedance of water quality objectives for bacteria, and WQBELs are required.

The Basin Plan states that any discharge to a water body with a REC-1 designated use shall not have bacterial densities in excess of the following:

- E. coli***. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a Most Probable Number (MPN) of 126 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.
- Enterococci**. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not

exceed a MPN of 33 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 100 per 100 milliliters.

- (c) **Fecal Coliform.** The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 200 per 100 milliliters, nor shall more than ten percent of the total samples during any 30-day period exceed a MPN of 400 per 100 milliliters.

Effluent limitations for *E. coli*, enterococci, and fecal coliform are incorporated in this Order. The bacterial indicators of *E. coli*, enterococci, and fecal coliform are used to estimate the presence of pathogens in the wastewater effluent discharged to Discharge Point 001. Effluent limitations for *E. coli*, enterococci, and fecal coliform shall be used as an indicator to determine the effectiveness of the wastewater treatment facility's disinfection system. These effluent limitations will ensure that water quality objectives for bacteria, as established by Chapter 3 of the Basin Plan and consistent with the New River Pathogen TMDL, will be maintained.

**b. Oil and Grease and Floating Material**

The Basin Plan contains narrative water quality objectives for oil and grease and floating material in surface waters, stating: "All waters shall be free from substances attributable to wastewater of domestic or industrial origin or other discharges which adversely affect beneficial uses not limited to: floating as debris, scum, grease, oil, wax, or other matter that may cause nuisance."

Oil and grease are pollutants that generally may be found in sanitary waste from households, businesses, and industries, and POTWs typically are designed to remove these constituents. Oil and grease removal is typically achieved during primary treatment. Based on information included in self-monitoring reports submitted by the Discharger, annual effluent samples for oil and grease indicate their presence in the effluent (detectable concentration at 297 mg/L).

Therefore, the discharge demonstrates a reasonable potential to cause or contribute to a receiving water excursion above the Basin Plan's narrative objective for oil and grease and floating material. This Order carries forward the MDEL for oil and grease to implement the narrative water quality objective contained in the Basin Plan and protect the beneficial uses of the Dixie Drain 1-C. The effluent limitation for oil and grease is carried forward from the previous Order and was originally based on the numeric limitation (MDEL) included in the adopted Order R7-2015-0006 (NPDES Permit No. CAG997001) *General Waste Discharge Requirements for Low Threat Discharges to Surface Waters Within the Colorado River Basin Region*.

**c. Chlorine**

Chapter 3 of the Basin Plan contains a narrative water quality objective for surface water that "No individual chemical or combination of chemicals shall be present in concentrations that adversely affect beneficial uses." This narrative objective applies to the chemical chlorine.

As described above, the WWTP effluent is treated through the four-cell aerated treatment system that undergoes disinfection by chlorination, followed by dechlorination. The disinfection system uses liquid sodium hypochlorite for disinfection followed by liquid sodium bisulfite for dechlorination prior to discharge through Discharge Point 001 to the Dixie Drain 1-C.

Because the disinfection process involves chlorination and dichlorination, the discharge demonstrates a reasonable potential to cause or contribute to an excursion in the receiving water above the water quality objective. This Order carries forward the

effluent limitations from the previous Order and was originally based on the detection limit listed in *Standard Methods for the Examination of Water and Wastewater 20<sup>th</sup> edition*.

d. **Whole Effluent Toxicity (WET)**

The Basin Plan specifies a narrative objective for toxicity, requiring that all waters be maintained free of toxic substances in concentrations that are lethal to aquatic organisms or that produce other detrimental response(s) in aquatic organisms. A detrimental response includes, but is not limited to, decreased growth rate, decreased reproductive success of resident or indicator species, and/or significant alterations in population, community ecology, or receiving water biota.

The SIP requires the use of short-term chronic toxicity tests to determine compliance with the narrative toxicity objectives for aquatic life in the Basin Plan. The SIP requires that the Discharger demonstrate the presence or absence of chronic toxicity using tests on the fathead minnow, *Pimephales promelas*, the water flea, *Ceriodaphnia dubia*, and the freshwater alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*). The MRP (Attachment E of this Order) requires annual chronic WET monitoring to demonstrate compliance with the narrative toxicity objective.

The previous Order contained narrative toxicity language and established accelerated monitoring triggers for whole effluent toxicity, as well as routine monitoring requirements. During the past permit term, the Discharger did not exceed any toxicity triggers during annual chronic toxicity testing. The Discharger will continue to conduct annual chronic WET monitoring once per year to demonstrate compliance with the narrative toxicity objective, as provided in the MRP. In addition, this Order establishes thresholds that, when exceeded, require the Discharger to conduct accelerated toxicity testing and/or conduct Toxicity Reduction Evaluation (TRE) studies.

Numeric chronic toxicity effluent limitations have not been included in the Order for consistency with the SIP, which implements narrative toxicity objectives in basin plans and specifies use of a numeric trigger for accelerated monitoring and implementation of a Toxicity Reduction Evaluation (TRE) study in the event that persistent toxicity is detected.

## 6. Summary of Water Quality-based Effluent Limitations

**Table F-11. Summary of Water Quality-based Effluent Limitations**

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Escherichia Coli ( <i>E. coli</i> )	MPN/100 ml	126 <sup>1</sup>	---	400 <sup>2</sup>	---	---
Enterococci	MPN/100 ml	33 <sup>1</sup>	--	100 <sup>2</sup>	---	---
Fecal coliform	MPN/100 ml	200 <sup>1</sup>	---	400 <sup>3</sup>	---	---
Copper, Total Recoverable	µg/L	17	---	35	---	---
	lbs/day <sup>4</sup>	0.139	---	0.280	---	---
alpha-BHC	µg/L	0.013	---	0.026	---	---
	lbs/day <sup>4</sup>	0.0001	---	0.0021	---	---
Chlorine, Total Residual	mg/L	0.01	---	---	---	0.02
	lbs/day <sup>4</sup>	0.08	---	---	---	---

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and grease, Total	mg/L	---	---	25	---	---
	lbs/day <sup>4</sup>	---	---	200	---	---

<sup>1</sup> This effluent limitation is expressed as a geometric mean, based on a minimum of not less than five equally spaced samples collected for any 30-day period.

<sup>2</sup> This effluent limitation is expressed as a maximum single sample value.

<sup>3</sup> No more than ten percent of the total fecal coliform samples collected during any 30-day period shall exceed a MPN of 400 per 100 milliliters.

<sup>4</sup> The mass-based effluent limitations are based on a design capacity of 0.96 MGD.

- a. **Toxicity:** There shall be no toxicity in the treatment plant effluent. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, or toxicity tests of appropriate duration or other appropriate methods specified by the Colorado River Basin Water Board in the MRP.

## D. Final Effluent Limitation Considerations

### 1. Anti-Backsliding Requirements

The Clean Water Act specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in Clean Water Act sections 402(o) or 303(d)(4), or, where applicable, 40 C.F.R. section 122.44(l).

The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order (R7-2014-0003). The narrative TDS effluent limitation in the previous Order was couched as a receiving water limitation and compliance was measured as the discharge not causing the concentration of TDS in the receiving water to exceed an annual average concentration of 4,000 mg/l or a maximum daily concentration of 4,500 mg/l. This Order retains the very same receiving water requirements in Section V.A.13. Namely, this Order still requires, as before, that the discharge shall not cause the concentration of TDS in the Dixie Drain 1-C to exceed an annual average concentration of 4,000 mg/l or a maximum daily concentration of 4,500 mg/l. As such, the anti-backsliding requirements do not apply, because the removal of the TDS narrative effluent limit has not resulted in any less stringent requirements in the permit.

Moreover, any relaxation of effluent limitations is consistent with the anti-backsliding requirements of the Clean Water Act and federal regulations. Clean Water Act section 402(o)(1) prohibits the establishment of less stringent WQBELs "except in compliance with section 303(d)(4)." Clean Water Act section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters.

1. For waters where standards are not attained, Clean Water Act section 303(d)(4)(A) specifies that any effluent limit based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limits based on such TMDLs or WLAs will assure the attainment of such water quality standards.
2. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the Antidegradation Policy.

The Dixie Drain 1-C is considered an attainment water for TDS because the receiving water is not listed as impaired on the 303(d) List for this constituent. As discussed in Section IV.D.2, below, removal or relaxation of the TDS effluent limitation complies with

federal and state antidegradation requirements. Thus, the removal of the effluent limitation for TDS meets the exception in Clean Water Act section 303(d)(4)(B).

## **2. Antidegradation Policies**

The permitted surface water discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution No. 68-16.

The source water for the Facility and the entire Imperial Valley is the Colorado River. Average annual precipitation in the Imperial Valley is insignificant (approximately 2 inches/year). Agricultural return flows discharge to approximately 30 Imperial Valley Drains, including the Dixie Drain 1-C, including tilewater and tailwater from farmlands. The Dixie Drain 1-C is primarily an agricultural-dominated surface water that also carries discharges from WWTPs. The drain discharges to the New River, which in turn discharges to the Salton Sea.

The discharge from the WWTP contains conventional pollutants (BOD<sub>5</sub>, TSS, fecal coliform bacteria, *E.Coli*, oil and grease, and pH) that are controlled through best practicable control technology currently available (BPT) and best available technology economically achievable (BCT) to prevent exceedances of water quality objectives for those pollutants and prevent adverse impacts on the beneficial uses of the Dixie Drain 1-C. The discharge also contains TDS, but at concentrations significantly below the 4,000 mg/L TDS water quality objective for the receiving water. Nickel, selenium, zinc, cyanide, bromoform and chlorodibromomethane were detected; however, at concentrations below applicable water quality criteria and are not believed to adversely affect the beneficial uses of Dixie Drain 1-C. Detectable quantities of dichlorobromomethane also not believed to adversely affect the beneficial uses of the receiving water as no criteria have been established for this pollutant. Further, consistent with procedures in section 1.3 of the SIP, this Order continues to require the Discharger to conduct annual monitoring for priority pollutants to provide data to continue to evaluate the impacts of the discharge on the receiving stream. For toxic pollutants, including copper and alpha-BHC, this degradation will be not significant once controlled and will not result in water quality less than prescribed in the Basin Plan.

The addition of several constituents from the discharge, such as BOD<sub>5</sub>, TSS, and bacteria, are likely to lower water quality in the receiving water (i.e., cause some degradation). However, the Colorado River Basin Water Board has determined that some degradation of receiving water from the WWTP discharge is consistent with the federal and state antidegradation policies, because any limited degradation: (a) is confined to a reasonable area; (b) is minimized by means of full implementation, regular maintenance, and optimal operation of best practicable treatment and control measures by the Discharger; (c) is primarily limited to waste constituents typically encountered in domestic wastewater; (d) does not unreasonably effect any present or anticipated beneficial uses of groundwater prescribed in the Basin Plan, and will not result in the violation of any water quality objective; and (e) is consistent with the maximum benefit to the people of the state.

The discharge from the WWTP as permitted herein reflects best practicable treatment and control (BPTC) for the subject wastewater. The control is intended to ensure that the discharge does not create a condition of pollution or nuisance and that the highest background water quality will be maintained. The WWTP incorporates:

- a. Technology for secondary treated domestic wastewater;
- b. Effluent disinfection;
- c. An operation and maintenance manual; and
- d. Staffing to assure proper operation and maintenance.

The discharge is necessary to accommodate essential public services for Centinela State Prison, which is an important benefit to the state. The technology, energy, water recycling, and waste management advantages of local utility service for the relevant community far exceeds any benefits derived from reliance on septic systems or package plants, and the impacts on water quality will be substantially lower. Based on the foregoing, the discharge as permitted herein is consistent with the federal and state antidegradation policies.

Moreover, the removal of the narrative TDS effluent limitation will not affect the quality of the discharge or degrade the receiving waters. As noted above, concentrations of TDS in the effluent are significantly below the 4,000 mg/L annual average TDS water quality objective for the receiving water. The discharge was not found to have any reasonable potential to increase the content of TDS in receiving waters. Therefore, the Colorado River Basin Water Board finds that the removal of the effluent limitation for TDS will not result in an increase in pollutants or any additional degradation of the receiving water. Thus, any relaxation of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.

### **3. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD<sub>5</sub>, TSS, percent removal, and pH specified in federal regulations as discussed in 40 C.F.R. part 133 and the permit's technology-based pollutant restrictions are no more stringent than those typically required by the Clean Water Act for POTWs. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The scientific procedures for calculating the individual WQBELs are based on the CTR-SIP, which was approved by the USEPA on May 18, 2000. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the Clean Water Act.

The Colorado River Basin Water Board has considered the factors in Water Code section 13263, including the provisions of Water Code section 13241, in establishing these requirements.

#### **E. Interim Effluent Limitations – Not Applicable**

#### **F. Final Effluent Limitations**

Table F-12 below summarizes the proposed effluent limitations for the discharge from the treatment system through Discharge Point 001. Proposed effluent limitations are based on secondary treatment standards, equivalent to secondary treatment standards, California Toxics Rule, and Colorado River Basin Plan water quality standards.

##### **1. Mass-based Effluent Limitations**

40 C.F.R. section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and section 122.45(f)(2) allows pollutants that are limited



in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Mass-based effluent limitations are established using the following formula:

$$\text{Mass (lbs/day)} = \text{flow rate (MGD)} \times 8.34 \times \text{effluent limitation (mg/L)}$$

Where: Mass = mass limitation for a pollutant (lbs/day)

Effluent limitation = concentration limit for a pollutant (mg/L)

Flow rate = discharge flow rate (MGD)

## 2. Final Effluent Limitations

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the MRP.

**Table F-12. Summary of Final Effluent Limitations**

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	MGD	0.96	---	---	---	---	BPJ
BOD <sub>5</sub>	mg/L	45	65	---	---	---	40 C.F.R. 133
	lbs/day <sup>1</sup>	360	520	---	---	---	
TSS	mg/L	59	89	---	---	---	40 C.F.R. 133
	lbs/day <sup>1</sup>	472	713	---	---	---	
pH	standard units	---	---	---	6.0	9.0	40 C.F.R. 133
Oil and Grease <sup>2</sup>	mg/L	---	---	25	---	---	Basin Plan
	lbs/day <sup>1</sup>	---	---	200	---	---	
Copper, Recoverable Total	µg/L	17	---	35	---	---	CTR, SIP
	lbs/day <sup>1</sup>	0.139	---	0.280	---	---	
alpha-BHC	µg/L	0.013	---	0.026	---	---	CTR, SIP
	lbs/day <sup>1</sup>	0.0001	---	0.0021	---	---	
Chlorine, Residual Total	mg/L	0.01	---	---	---	0.02	Basin Plan
	lbs/day <sup>1</sup>	0.08	---	---	---	---	

<sup>1</sup> The mass-based effluent limitations are based on a design capacity of 0.96 MGD.

<sup>2</sup> Total oil and grease shall include the polar and non-polar fraction of oil and grease materials.

- b. **Percent Removal:** The average monthly percent removal of biochemical oxygen demand (5-day at 20°C; BOD<sub>5</sub>) and TSS shall not be less than 65 percent.
- c. **Toxicity:** There shall be no toxicity in the treatment plant effluent. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, or toxicity tests of appropriate

duration or other appropriate methods specified by the Colorado River Basin Water Board, as set forth in Section V of Attachment E, MRP.

- d. **Bacteria:** The bacterial concentrations in the wastewater effluent discharged to the Dixie Drain 1-C shall not exceed the following concentrations, as measured by the following bacterial indicator:
  - i. ***E. coli***. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 126 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 400 per 100 milliliters.
  - ii. **Enterococci**. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 33 per 100 milliliters, nor shall any sample exceed the maximum allowable bacterial density of a MPN of 100 per 100 milliliters.
  - iii. **Fecal Coliform**. The geometric mean bacterial density (based on a minimum of not less than five samples equally spaced over a 30-day period) shall not exceed a MPN of 200 per 100 milliliters, nor shall more than ten percent of the total samples during any 30-day period exceed a MPN of 400 per 100 milliliters.

**G. Land Discharge Specifications – Not Applicable**

**H. Recycling Specifications – Not Applicable**

**V. RATIONALE FOR RECEIVING WATER LIMITATIONS**

**A. Surface Water**

Clean Water Act section 303, subdivisions (a) through (c), require states to adopt water quality standards, including water quality criteria where necessary to protect beneficial uses. The Colorado River Basin Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, color, chemical constituents, dissolved oxygen, oil, grease and floating material, pH, pesticides, settleable substances, tastes and odors, temperature, toxicity, and turbidity.

**B. Groundwater – Not Applicable**

**VI. RATIONALE FOR PROVISIONS**

**A. Standard Provisions**

The Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under 40 C.F.R. section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. 40 C.F.R. section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2), because the enforcement authority under the Water

Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code sections 13268, 13385, 13386, and 13387.

## **B. Special Provisions**

### **1. Reopener Provisions**

This section is based on 40 C.F.R. parts 122 through 124. The Colorado River Basin Water Board may reopen the permit to modify permit conditions and requirements. Causes for modification include, but are not limited to, the promulgation of new regulations, modification in the Discharger's disposal practices, or the adoption of new regulations by the State Water Board or Colorado River Basin Water Board, including revisions to the Basin Plan.

### **2. Special Studies and Additional Monitoring Requirements**

- a. **TRE Work Plan.** This provision is based on the SIP, section 4, Toxicity Control Provisions.
- b. **Optional Translator Study.** This provision is based on the SIP and allows the Discharger to conduct an optional translator study, based on the SIP and at the Discharger's discretion. This provision is based on the need to gather site-specific information in order to apply a different translator from the default translator specified in the CTR and SIP. Without site-specific data, the default translators are used with the CTR criteria.
- c. **Total Dissolved Solids Study.** The purpose of this study was to provide more detailed information on the Colorado River Basin Water Board's development of salinity standards pursuant to section 303 of the Clean Water Act and through the NPDES permitting authority in the regulation of municipal and industrial sources (see section 402 of the federal Water Pollution Control Act). The Discharger has satisfied the requirements for this provision.

### **3. Best Management Practices and Pollution Prevention**

- a. **Pollutant Minimization Program.** This provision is based on the requirements of section 2.4.5 of the SIP.
- b. **Spill Response Plan.** This provision is based on the requirements of 40 C.F.R. section 122.41(e) and the previous Order.
- c. **Storm Water.** This provision is based on State Water Board Order 2014-0057-DWQ, NPDES permit No. CAS000001, *General Permit for Storm Water Discharges Associated with Industrial Activities*.

### **4. Construction, Operation, and Maintenance Specifications**

- a. **Treatment Basins.** These provisions are included to ensure compliance with requirements established in this Order R7-2019-0003, and are based on the Clean Water Act, USEPA regulations, the Water Code, and Colorado River Basin Water Board plans and policies.
- b. **Facility and Treatment Operation.** This provision is based on the requirements of 40 C.F.R. section 122.41(e) and the previous Order.
- c. **Antidegradation Analysis and Engineering Report for Significant Expansion.** This report and analysis are required if the Discharger proposes to significantly upgrade existing treatment systems. The Discharger would be required to evaluate treatment capacity, address mass increases of pollutants discharged, and propose additional units as necessary to enable adequate treatment, while ensuring that any

proposed increases in discharges will not violate the State Water Board's antidegradation policy.

#### **5. Special Provisions for Municipal Facilities (POTWs Only)**

- a. **Pretreatment Program Requirements.** Requirements are based on the previous Order and 40 C.F.R. part 403. The Clean Water Act requires a discharger to implement a pretreatment program if the facility has a treatment capacity greater than 5 MGD and receives industrial users' pollutants which pass through or interfere with the operation of the POTW. Currently, the Facility has a design treatment capacity of less than 1 MGD and no pretreatment program is required.

- b. **Collection Systems.** Requirements are based on 40 C.F.R. section 122.41.

The State Water Board issued *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, Order 2006-0003-DWQ (General Order) on May 2, 2006. The monitoring and reporting requirements for the General Order were amended by Order WQ 2008-0002-EXEC on February 20, 2008. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions. Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows.

Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, Section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the Facility were required to obtain enrollment for regulation under the General Order by December 1, 2006. The Discharger is enrolled under the Sanitary Sewer Orders and the Discharger's WDID number is 7SSO11187.

- c. **Sewage Sludge and Biosolids.** Requirements are based on 40 C.F.R. part 503, 257, and 258.

#### **6. Other Special Provisions**

Special Provisions VI.C.6.a and VI.C.6.b are included to ensure compliance with requirements established in this Order R7-2019-0003, and are based on the previous Order, the Clean Water Act, USEPA regulations, the California Water Code, and Colorado River Basin Water Board plans and policies.

#### **7. Special Provisions Reporting Schedules**

The reporting schedules specify the deliverables and due dates for the Spill Response Plan, TRE Workplan, Antidegradation Analysis and Engineering Report for Significant Expansion, and PMP.

### **VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS**

Clean Water Act section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Colorado River Basin Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

#### **A. Influent Monitoring**

This Order carries forward the treatment plant influent monitoring requirements from Order R7-2014-0003.

#### **B. Effluent Monitoring**

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are given in the proposed MRP. This provision requires compliance with the MRP, and is based on 40 C.F.R. sections 122.44(i), 122.62, 122.63 and 124.5. The MRP is a standard requirement in almost all NPDES permits (including the proposed Order) issued by the Colorado River Basin Water Board. In addition to containing definitions of terms, it specifies general sampling/analytical protocols and the requirements of reporting of spills, violations, and routine monitoring data in accordance with NPDES regulations, the Water Code, and the Colorado River Basin Water Board's policies. The MRP also contains sampling program specific to the Discharger's wastewater treatment facility. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified. Further, in accordance with section 1.3 of the SIP, periodic monitoring is required for all priority pollutants defined by the CTR, for which the criteria apply and for which no effluent limitations have been established, to evaluate reasonable potential to cause or contribute to an excursion above a water quality standard.

Monitoring for those pollutants expected to be present in the discharge from the Facility at Discharge Point 001 (Monitoring Location EFF-001) will be required as shown in the proposed MRP and as required by the SIP.

Effluent monitoring requirements are unchanged from the previous Order, with the exception of the establishment of monthly monitoring for copper and alpha-BHC. This monitoring is necessary in order to verify compliance with effluent limitations for these parameters, which have been newly established in this Order.

#### **C. Whole Effluent Toxicity Testing Requirements**

Whole effluent toxicity (WET) testing requirements establish monitoring of the effluent to ensure that the receiving water quality is protected from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. This permit requires chronic toxicity testing.

This requirement establishes conditions and protocols by which compliance with the Basin Plan narrative water quality objective for toxicity will be demonstrated. Conditions include required monitoring and evaluation of the effluent for chronic toxicity, and provide monitoring triggers that, when exceeded, require the Discharger to initiate accelerated testing, TRE, and TIE procedures. The WET testing requirements in this Order include a screening phase and a monitoring phase of species testing. Screening is required during the first and fourth years of the permit term, to determine the most sensitive species that the Discharger will continue to use during the monitoring phase. This Order also includes implementation procedures for toxicity caused by ammonia, ionic imbalance, and elevated TDS concentrations.

The WET testing requirements contained in the MRP, Section V were developed based on the *Draft National Whole Effluent Toxicity (WET) Implementation Guidance Under the NPDES Program* (EPA 832-B-04-003), the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003), and *Technical Support Document for Water Quality-based Toxics Control* (EPA 833-5-91-100). This is the most current guidance available to the Colorado River Basin Water Board.

USEPA has developed a statistical approach that assesses the WET measurement of wastewater effects on specific test organisms' ability to survive, grow, and reproduce. The

approach is called the Test of Significant Toxicity (TST) and is a statistical method that uses hypothesis testing techniques based on research and peer-reviewed publications. The TST approach examines whether an effluent at the critical concentration (e.g., in-stream waste concentration or IWC, as recommended in USEPA's *Technical Support Document* [EPA 833-5-91-100] and implemented under USEPA's WET NPDES permits program) and the control within a WET test differ by an unacceptable amount; i.e., the amount that would have a measured detrimental effect on the ability of aquatic organisms to thrive and survive. This Order requires the Discharger to utilize the TST approach in conducting WET testing.

#### **D. Receiving Water Monitoring**

##### **1. Surface Water**

Surface water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water pursuant to the Basin Plan. Monitoring requirements for the receiving water are unchanged from the previous Order. Additionally, annual monitoring for priority pollutants in the upstream receiving water has been continued, as required in accordance with the SIP.

##### **2. Groundwater - Not Applicable**

#### **E. Other Monitoring Requirements**

##### **1. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program**

Under the authority of section 308 of the Clean Water Act (33 U.S.C. § 1318), USEPA requires major and selected minor dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

### **VIII. PUBLIC PARTICIPATION**

The Colorado River Basin Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Discharger. As a step in the WDRs adoption process, the Colorado River Basin Water Board staff has developed tentative WDRs and has encouraged public participation in the WDRs adoption process.

#### **A. Notification of Interested Parties**

The Colorado River Basin Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the Imperial Valley Press newspaper.

The public had access to the agenda and any changes in dates and locations through the Colorado River Basin Water Board's website at:

**B. Written Comments**

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Colorado River Basin Water Board at 73-720 Fred Waring Drive, Suite 100, Palm Desert, CA 92260.

To be fully responded to by staff and considered by the Colorado River Basin Water Board, the written comments were due at the Colorado River Basin Water Board office by **5:00 p.m. on March 28, 2019.**

**C. Public Hearing**

The Colorado River Basin Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: April 11, 2019  
Time: 9:00 AM  
Location: California Regional Water Quality Control Board  
Colorado River Basin Region Board Room  
73-720 Fred Waring Drive, Suite 100  
Palm Desert, CA 92260

Interested persons were invited to attend. At the public hearing, the Colorado River Basin Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

**D. Reconsideration of Waste Discharge Requirements**

Any person aggrieved by this action of the Colorado River Basin Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and the California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality](http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

or will be provided upon request.

State Water Resources Control Board  
Office of Chief Counsel  
P.O. Box 100, 1001 I Street  
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see:

[http://www.waterboards.ca.gov/public\\_notices/petitions/water\\_quality/wqpetition\\_instr.shtml](http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml)

**E. Information and Copying**

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through Colorado River Basin Water Board by calling (760) 346-7491.

**F. Register of Interested Persons**

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Colorado River Basin Water Board, reference this Facility, and provide a name, address, and phone number.

**G. Additional Information**

Requests for additional information or questions regarding this Order should be directed to Kai Dunn at (760) 776-8986.



## ATTACHMENT G – SUMMARY OF WQBELS CALCULATIONS

The WQBELS developed for this Order are summarized below and were calculated as described in the methodology summarized in Attachment F, Fact Sheet and are contained in Section IV.A.1.a of this Order.

**Table G-1. Summary of WQBELS Calculations**

CTR #	Parameter	Human Health Calculations			Aquatic Life Calculations											Effluent Limitations	
		Organism Only			Freshwater												
		AMEL HH = ECA = C HH only	MDEL/ AMEL multiplier	MDEL HH	ECA acute = C acute	ECA acute multiplier	LTA acute	ECA chronic = C chronic	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier 95	AMEL aquatic life	MDEL multiplier 99	MDEL aquatic life	AMEL	MDEL
		µg/L		µg/L	µg/L		µg/L	µg/L		µg/L	µg/L					µg/L	µg/L
6	Copper, Recoverable Total	---	---	---	34.94	0.32	11.22	21.38	0.53	11.28	11.22	1.55	17.42	3.11	34.94	17	35
103	alpha-BHC	0.013	2.01	0.026	---	---	---	---	---	---	---	1.55	---	3.11	---	0.013	0.026

## **ATTACHMENT H – BIOSOLIDS AND SLUDGE MANAGEMENT**

### **BIOSOLIDS USE AND DISPOSAL REQUIREMENTS**

- A.** All biosolids generated by the Discharger shall be reused or disposed of in compliance with the applicable portions of:
  - 2.** 40 C.F.R. part 503: for biosolids that are land applied, placed in surface disposal sites (dedicated land disposal sites or monofills), or incinerated. 40 C.F.R. part 503, Subpart B (land application) applies to biosolids placed on the land for the purpose of providing nutrients or conditioning the soil for crops or vegetation. 40 C.F.R. part 503, Subpart C (surface disposal) applies to biosolids placed on the land for the purpose of disposal.
  - 3.** 40 C.F.R. part 258: for biosolids disposed of in Municipal Solid Waste landfills.
  - 4.** 40 C.F.R. part 257: for all biosolids disposal practices not covered under 40 C.F.R. part 258 or 503.
- B.** The Discharger is responsible for ensuring that all biosolids from the Facility are used or disposed of in accordance with 40 C.F.R. part 503, whether the Discharger reuses or disposes of the biosolids itself or transfers them to another party for further treatment, reuse, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, or disposers of the requirements they must meet under 40 C.F.R. part 503.
- C.** The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal that may adversely impact human health or the environment.
- D.** No biosolids shall be allowed to enter wetland or other waters of the United States.
- E.** Biosolids treatment, storage, and use or disposal shall not contaminate groundwater.
- F.** Biosolids treatment, storage, and use or disposal shall not create a nuisance, such as objectionable odors or flies.
- G.** The Discharger shall ensure that haulers who transport biosolids off site for further treatment, storage, reuse, or disposal take all necessary measures to keep the biosolids contained.
- H.** If biosolids are stored for over two years from the time they are generated, the Discharger must ensure compliance with all the requirements for surface disposal under 40 C.F.R. part 503, Subpart C, or must submit a written request to USEPA with the information enumerated in 40 C.F.R. section 503.20 (b), requesting permission for longer temporary storage.
- I.** Sewage sludge containing more than 50 mg/kg PCBs shall be disposed of in accordance with 40 C.F.R. part 761.
- J.** Any off-site biosolids treatment, storage, use, or disposal site operated by the Discharger within the Colorado River Basin Region that is not subject to its own WDRs shall have facilities adequate to divert surface runoff from the adjacent area, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site to escape from the site. Adequate protection is defined as protected from at least a 100-year storm and from the highest tidal stage that may occur.
- K.** The USEPA or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the Discharger, directly or through contractual arrangements with their biosolids management contractors, to:
  - 1.** Enter upon all premises where biosolids are produced by the Discharger and all premises where such biosolids are further treated, stored, used, or disposed, either by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal.

2. Have access to and copy any records that must be kept under the conditions of this permit or of 40 C.F.R. part 503, by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal.
3. Inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in the production of biosolids and further treatment, storage, use, or disposal by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal.

**L. Monitoring shall be conducted as follows:**

1. Biosolids shall be tested for the metals required in 40 C.F.R. section 503.16 (for land application) or section 503.26 (for surface disposal), using the methods in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (EPA SW-846), as required in section 503.8(b)(4), at the following minimum frequencies:

<u>Volume (dry metric tons/year)</u>	<u>Frequency</u>
0 – 290	once per year
290 – 1500	once per quarter
1500 – 15000	once per 60 days
> 15000	once per month

For accumulated, previously untested biosolids, the Discharger shall develop a representative sampling plan, which addresses the number and location of sampling points, and collect representative samples.

Test results shall be expressed in milligrams of pollutant per kilograms of biosolids on a 100% dry weight basis.

Biosolids to be land applied shall be tested for Organic-N, ammonium-N, and nitrate-N at the frequencies required above.

2. Prior to land application, the Discharger shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in 40 C.F.R. section 503.32. Prior to disposal in a surface disposal site, the Discharger shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day.
3. For biosolids that are land applied or placed in a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve vector attraction reduction requirements in 40 C.F.R. section 503.33(b).
4. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and federal facilities with greater than 5 MGD influent flow shall sample biosolids for pollutants listed under Clean Water Act section 307(a) (as required in the pretreatment section of the permit for POTWs with pretreatment programs). Class 1 facilities and federal facilities with greater than 5 MGD influent flow shall test dioxins/dibenzofurans using a detection limit of less than 1 pg/g during their next sampling period if they have not done so within the past 5 years and once per 5 years thereafter.
5. The biosolids shall be tested annually or more frequently if necessary to determine hazardousness in accordance with California law.
6. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

7. Biosolids placed in a municipal landfill shall be tested semi-annually by Method 9095: *Paint Filter Liquids Test* (EPA SW-846, 2004) to demonstrate that there are no free liquids.
- M.** The Discharger, either directly or through contractual arrangements with their biosolids management contractors, shall comply with the following 40 C.F.R. part 503 notification requirements:
1. A reuse/disposal plan shall be submitted to the USEPA Region IX Coordinator and to the state permitting agency, prior to the use or disposal of any biosolids from the Facility to a new or previously unreported site. The plan shall be submitted by the land applier of the biosolids and shall include, a description and a topographic map of the proposed site(s) for reuse or disposal, names and addresses of the applier(s) and site owner(s), and a list of any state or local permits which must be obtained. For land application sites, the plan shall include a description of the crops or vegetation to be grown, proposed nitrogen loadings to be used for the crops, and a groundwater monitoring plan if one exists.
  2. If the biosolids do not meet 40 C.F.R. section 503.13, Table 3 metals concentration limits, the Discharger must require their land applier to contact the state permitting authority to determine whether bulk biosolids subject to the cumulative pollutant loading rates in 40 C.F.R. section 503.12(b)(2) have been applied to the site since July 20, 1993, and, if so, the cumulative amount of pollutants applied to date, and background concentration, if known. The Discharger shall then notify USEPA Region IX Coordinator of this information.
  3. For biosolids that are land applied, the Discharger shall notify the applier in writing of the nitrogen content of the biosolids, and the applier's requirements under 40 C.F.R. part 503, including the requirements that the applier certify that the requirement to obtain information in Subpart A, and that the management practices, site restrictions, and any applicable vector attraction reduction requirements Subpart D have been met. The Discharger shall require the applier to certify at the end of 38 months following application of Class B biosolids that those harvesting restrictions in effect for up to 38 months have been met.
  4. If bulk biosolids are shipped to another state or to tribal land, the Discharger must send written notice prior to the initial application of bulk biosolids to the permitting authorities in the receiving state or tribal land (the USEPA Regional Office for the area and the state/tribal authorities).
  5. Notification of 40 C.F.R. part 503 non-compliance: The Discharger shall require appliers of their biosolids to notify USEPA Region 9 and their state permitting agency of any noncompliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Discharger shall require appliers of their biosolids to notify USEPA Region 9 and their state permitting agency of the non-compliance in writing within 10 working days of becoming aware of the non-compliance.
- N.** The Discharger shall submit an annual biosolids report to USEPA Region IX Biosolids Coordinator and the Colorado River Basin Water Board by February 19 of each year for the period covering the previous calendar year. The report shall include:
1. The amount of biosolids generated that year, in dry metric tons, and the amount accumulated from previous years.
  2. Results of all pollutant monitoring required in the Monitoring Section above.
  3. Descriptions of pathogen reduction methods, and vector attraction reduction methods, as required in 40 C.F.R. sections 503.17 and 503.27.
  4. Results of any groundwater monitoring or certification by groundwater scientist that the placement of biosolids in a surface disposal site will not contaminate an aquifer.

5. Names and addresses of land appliers and surface disposal site operators, and volumes applied (dry metric tons).
  6. Names and addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, or for other reuse/disposal methods not covered in N.3, above, and volumes delivered to each.
- O. The Discharger shall require all parties contracted to manage their biosolids to submit an annual biosolids report to USEPA Region IX Biosolids Coordinator by February 19 of each year for the period covering the previous calendar year. The report shall include:
1. Names and addresses of land appliers and surface disposal site operators, name, location (latitude/longitude), and size (hectares) of site(s), volumes applied/disposed (dry metric tons) and for land application, biosolids loading rates (metric tons per hectare), nitrogen loading rates (kg/ha), dates of applications, crops grown, dates of seeding and harvesting and certifications that the requirement to obtain information in 40 C.F.R. section 503.12(e)(2), management practices in section 503.14 and site restrictions in section 503.32(b)(5) have been met.